# THE VOCATIONAL RE-EDUCATION OF MAIMED SOLDIERS

LEON DE PAEUW

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# THE VOCATIONAL RE-EDUCATION OF MAIMED SOLDIERS

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BY

LEON DE PAEUW

INSPECTEUR-GÉNÉRAL DE L'ENSEIGNEMENT PRIMARIE DE BELGIQUE
ANCIEN CHEF DU CABINET CIVIL DU MINISTRE DE LA GUERRE

WITH A PREFACE BY

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TRANSLATED INTO ENGLISH BY

THE BARONNE MONCHEUR

AND

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# INTRODUCTION

I hardly feel qualified to express myself on a matter which depends almost entirely upon the knowledge of technical experts. We Belgians were indeed amongst the first to recognize the importance of physical reconstruction of disabled soldiers and to consider the rehabilitation of wounded men as a problem which needed the urgent and adequate coöperation of specialists. Among these, M. Léon de Paeuw has played a leading rôle which his previous training peculiarly fitted him to fill.

The policy which we have advocated is substantially the one which is to be followed in various hospitals designed in this country for the work of physical reconstruction and which the Surgeon General of the United States Army has outlined as follows: "No member of the military service disabled in line of duty, even though not expected to return to duty, will be discharged from service until he shall have attained complete recovery or as complete recovery as may be expected when the nature of his disability is considered. In furtherance of this policy, physical reconstruction is defined as complete mental and surgical treatment

carried to the point of maximum functional restoration both mental and physical."

Such a solution of the problem will appear to the readers of this book as the most progressive expression of the duties which our Governments have assumed towards the men who have shed their blood for the defense of Mankind. It may very well be looked upon as the supreme crystallization of a system which our daily experience has gradually simplified. We have found our own way; perhaps we have also paved the way for our Allies to follow. I need only mention that the First International Congress for the Re-education of Disabled Soldiers was held at Port-Villez in 1917 under the presidence of the Belgian Minister of War.

Mr. de Paeuw's book, to the translation of which Madame la Baronne Moncheur, the wife of the Belgian Minister in London, has graciously extended an invaluable coöperation, is more than a technical account and deserves more than a professional interest. It is a human document. I have read it with emotion. I have watched some of our heroes gradually recover under the auspices of the institutions which we have provided for them, until the day when Life called them back again, and I saw, on the threshold of a larger and better future, my appreciation and gratitude instinctively go to these pioneers who have devoted their energy

to the welfare of the men who will represent among us the everlasting virtues of duty and sacrifice.

E. DE CARTIER.
Belgian Minister to the United States.
Legation de Belgique, Washington, D. C.
October 26, 1918.

# PREFATORY LETTER

DEAR SIR:

It is indeed an honor to be asked to write a few lines of preface to your work on the vocational re-education of the maimed and crippled but, flattering as is that request, I am forced to admit that I do not find in it an evidence of your usual discernment. What can I say which might not be better said by more competent visitors to your schools at Sainte-Adresse, at Port-Villez, and at Mortain? What praises can I utter which would not have more weight and higher value coming from the lips of even the humblest of those brave soldiers who owe to your institutions a renewed confidence in life?

On the day after the battle where he has been wounded, on his discharge from the hospital where he has been operated on, or perhaps had a limb amputated, the soldier is tormented by the most bitter reflections. Certainly he is justly proud of having done his duty. The sympathy of his officers and comrades, the mingled pity and admiration which he reads in every glance, perhaps a decoration for bravery—all this warms his poor heart.

Nevertheless how terrible is the reality! A soldier—a Belgian soldier—cut off from all his family, deprived of the tenderness of a mother, of the loving cares of a wife, of the counsels of a father, of the caresses of his children,—and worse still, tortured by the unknown fate of all those dear ones! What is he to become with his aching body, disabled for life? He dreads idleness and at the same time fears that his attempting any work may reduce or destroy his right to a pension. The war ended, what will be his return home, if home still exists? Stripped of his uniform, what will remain of the few rays of glory which still comfort him today? Its radiance must soon pale and so many other victims of this terrible war must share its reflection with him. As time passes the prestige of his infirmity will pass with it, but the infirmity will become worse. Often the suffering which he endures is not even visible to the eyes of passers by; but unseen sufferings are not, alas, the least cruel!

Like the man in the parable who went on a journey and was attacked by robbers and left covered with wounds, he lies by the roadside. He suffers, he waits. Passers-by come and go. Little by little darkness falls, but here is the Samaritan who raises him up and consoles him and takes him to an inn. The inn in this case

is not a hospital, it is not an asylum for incurables, but a school, an institution for re-education, where in a kindly atmosphere intelligent care and methodical lessons will inspire the wounded man with new reasons and means for living. It is the crucible from which he will emerge fortified for new activities. The institute cannot indeed give back to the maimed the lost arm or leg. It cannot make new bones or muscles or flesh. But if it is true, as Emerson says, that the only mortal malady is the incapacity to improve, can there be any better cure for a poor abandoned being given over to despair, idleness, or perhaps beggary, than the vocational re-education which restores to a man his zest for life, his activity, and his pride? Among the associations which the war has called into being in our blood-stained old Europe, and which offer, along with the heroism of the soldiers and their families, a compensation for so many horrors, crimes, and cowardices, I know of none more beautiful than this.

I understand how enlightened and generous men like Monsieur Maurice Barrès and Monsieur Edouard Herriot in France, Sir Thomas Barclay in England, Professors Chevally and Galeazzi in Italy, have from the beginning devoted their best efforts to the advancement of re-education for the maimed. I understand

how in all the belligerent countries, among our allies as among our enemies, the same human problem engages the attention of doctors, pedagogues, and benevolent persons; and how each nation is more and more attentive to the experiments in re-education made in other countries.

It might have been feared that Belgium, crucified by so many misfortunes, would have been slower than other countries at war, not indeed in giving attention to the fate of her disabled soldiers, but in applying the remedy to their ills; but such has not been the case. All communication being cut off between our soldiers and their families, there could be no question of sending the wounded back to their homes. If our maimed were not to be abandoned in a friendly but foreign land, it was necessary to make haste to gather them together and improvise some sort of an organization suited to their needs. When the needs are as new and unforeseen as in this case, there is at least the advantage of not having to count upon the entanglement of existing associations and institutions. It is easier to construct on virgin soil with a view to actual necessities than it is to adapt old buildings, old regulations, and old ways to fresh needs. Instead of dividing the men in small groups among various local charities, public or private, where science and charity

do not always go hand in hand, there has been the marvellous inspiration of gathering the men into institutions made specially for them, and often by them, where everything has been planned and organized for one object—vocational re-education.

The disabled men of the Belgian army have not been discharged. They keep their uniforms. They were and they remain soldiers. Under that name they owe obedience, and unless there are some exceptional circumstances, the maimed are under orders to go to the Institute and remain there. Their present aptitude and capacity for work are established by a medical examination and developed by mecanotherapy. Some of the wounded take up again the trade they practiced before the war. Many learn new trades. Numerous vocations are discovered. Others undergo the most unexpected transformations. A circus clown becomes a decorative painter. One of his regimental companions was formerly a street-paver. He is now a pastry cook,—excelling in puff paste and frangipane. The mockers who call the schools of our glorious maimed "miracle courts" do not know how truly they speak. There are metamorphoses which promise strange surprises, as well as unhoped for resources, when the day of reunion with the family comes.

When the man has finished his apprentice-

ship and enters the shop where articles are made for sale, he soon is able to lay aside a portion of his wages and accumulates a small sum which will permit him on his return to Belgium to establish himself in business and found a new home. He will return, it is true, blind, lame, or with only one arm; but in compensation for having so gloriously suffered in the most noble of causes, he will have the resources of a trade or art which makes him capable of supporting a family.

Thus he will have the double honor of having aided in the defence of his country in war and in its restoration in peace. Is there not pride, even joy, mingled with the tears?

Does it not seem to you, my dear sir, that this brave soldier who yesterday was doing his military duty and who will tomorrow take up his rôle in civil and economic life, is, in a certain sense, the very symbol, the incarnation of Belgium herself?

Like this soldier, all our country has suffered and poured out her blood for the right. Ruins, wounds, mourning have stricken her, but not beaten her down. No matter what she may yet have to endure, she will hold out, to reappear after the victory greater and more respected. The universal testimony of humanity will henceforth honor in her the people who voluntarily and without calculation sacrificed

themselves in order to be faithful to their pledged word.

On the other hand the war will have been for the country a great school of national re-education. It will clear away many misunderstandings, many prejudices, many motives for quarrel, which embarrassed her path and retarded her progress. The war will have cemented her historic unity and tempered her energies. By revealing virtues which the country barely suspected, it will have given to the nation a fuller consciousness of her own value. By putting Belgium in contact with those sister nations who have given her asylum and protection after her sacrifice had helped to save them, the war will have secured for her precious experience and the coöperation of sincere sympathy.

And that is why, like the brave soldier, Belgium will take up tomorrow her laborious destiny with increased chances for success and prosperity. She will enlist in the universal effort new generations, better prepared, better equipped, more confident, than the generations which have preceded them.

Those who like you, dear sir, have watched over the re-education of our wounded soldiers will be equally attentive and devoted to the great work of the restoration of our country. The connection between this great work and the organization of primary instruction is too evi-

dent for me to dwell upon it. Your official duties will give you an important position in the educational field where obligatory primary education will henceforth be the dominating principle and where the excellent innovation of the "fourth grade" (higher instruction) will add social efficiency as varied as it is opportune. Everyone of good will and social activity will find employment there. It will be more than ever important to give to the moral, intellectual, and vocational formation of our young generations a uniform national rhythm. Thus all human values without exception will be utilized for the restoration and the good of the country.

I remember having seen on the walls of the shops organized by you this excellent maxim, destined to prevent disorder, distraction, and carelessness: "A place for everything and everything in its place." Do you not think that in the great workshop of the Belgium of tomorrow our citizens might be guided by a precept of the same sort, but with a more general application, "A place for every man and every man in his place"?

But in formulating this new maxim I perceive that I myself am not in accord with its precept, for truly my place is not on the first page of this volume, where a philosopher, an economist, or a moralist should have set forth

the great principles of vocational re-education and given you the praises which are your due. I am only an intruder here, and if you take my advice you will throw this letter into the waste basket. It is too long and yet incomplete, but my incompetent thought and inexperienced pen have run away with me. Retain only one thing—the expression of the great pleasure I have had in instructing myself from your book. This pleasure, I am certain, will be shared by other readers, and thus your object will be attained—to uplift the courage of our dear soldiers, to relieve their physical and moral suffering, and to enlighten all the good people with kind intentions and brotherly hearts who seek to help them.

Believe me, dear sir,

Yours very sincerely,

JULIETTE HENRY CARTON DE WIART.

Sainte-Adresse, November 12, 1916.

To M. LEON DE PAEUW,

*Inspector General of primary education in Belgium.*

*Pedagogic inspector in the schools for wards of the army, in the institutes for vocational re-education of wounded soldiers, and in the institutions for war orphans.*

# VOCATIONAL RE-EDUCATION OF MAIMED SOLDIERS

# FOREWORD

This book is the result of a year's experience. The theses which I defend have been verified by practice and confirmed by my excellent collaborators.

You will tell me that a year's experience is a small one; this is absolutely true in normal times, but since August 2, 1914, minutes have been as long as days, and years as long as centuries. Events have followed each other with the rapidity of lightning, and men have found themselves forced to take decisions without delay, spurred on by the necessity for action. Nevertheless, as the cases which have furnished these conclusions have been numerous, the conclusions themselves have greater chance to be exact, in spite of the haste with which they have had to be formulated. Therefore these pages are submitted with confidence to specialists in re-education, to philanthropists and, in a word, to all who in any capacity are interested in the vocational re-education of the maimed and mutilated.

# CHAPTER I

## It is the Sacred Duty of the Nation to Guarantee the Re-education of Its Maimed Soldiers

The nation called its soldiers and, like one man, they arose to defend the country. Some have fallen never to rise again and sleep the eternal sleep beneath their native soil. Others have received frightful wounds and have come back crippled, or mutilated from the infernal conflict. In the vigor of their youth they have seen their physical strength diminished by horrible wounds. Except for the war, they would still be rejoicing in the fullness of their strength. And now, at an age when physical and intellectual vigor should expand in overflowing activity, they are as decrepit as old men.

Many of them had just entered upon careers which promised to be happy and prosperous; a shell splinter or a rifle bullet has ended forever their fairest hopes. True life, independent life, which permits a man to give the measure of his power, had for many of them scarcely begun. They were equipped to surmount the obstacles which are usually encoun-

tered along the path of life. The war has tried them greatly, but still they hope that the path may be long which leads to the tomb. But what difficulties must they not conquer, what a calvary must they not climb, dragging after them like a cross their crutches, and their physical deformities!

Some who had expected to found a family find themselves now scarcely able to supply their own wants; others who had already the burden of a household ask anxiously who will now fill the mouths of the small beings they have created.

Here is, in short, the schedule of their losses. Who should repay them, if not the nation? It is for her they have sacrificed life, health, and their future. It is for her they have given their poor limbs. It is therefore for her an imperious duty to furnish them with the opportunity to re-arm themselves for the struggle of life, and by means of a proper vocational re-education to refit them for their place in society. The optimism which lies in the depths of every man will do the rest. For those who have escaped from the hell of modern battle, those whom death has brushed with his wings, appreciate life more intensely, even when it throbs in a mutilated body.

The re-education of maimed soldiers is not only an imperious duty for the nation. It is

also to her own greatest advantage that all those of her children whose productive capacities have been diminished or completely annihilated should recover their powers in the largest possible measure.

After the war, which will have made so many gaps in the ranks of the workers, every energy will be required to rebuild our ruins and to recover our former prosperity. Therefore let us strive to restore to our maimed soldiers their former economic value. What we do will be of double profit to the nation because we shall on the one hand augment the sum of our available force and, on the other, diminish the number of those unfortunate beings who, by their helplessness, place a heavy charge upon society. Thus self-interest is joined to duty. Reason leads to the same conclusions as the heart.

# CHAPTER II

## Obligatory Vocational Re-education

No one doubts the necessity, the imperious necessity, of giving a vocational re-education to maimed soldiers. Governments are now concerned about that question; in some countries various departments are simultaneously at work upon it, and praiseworthy efforts are being made which might, however, be more efficacious were they better coördinated. Charitable institutions have been opened by the dozen, and the sums at their disposal are reckoned at millions; but when one compares the money expended with the results obtained, the number of men to be re-educated with the capacities of the special institutions created for that purpose, one is appalled by the immensity of the work which must still be accomplished. Working men, suspicious by nature and fascinated by the prospect of a pension (alas, necessarily a very modest one!) dread to learn a new trade because they fear that their future pension may be reduced in proportion to the vocational capacities they acquire. It is therefore important to commence by destroying this illusion. In France the government has spoken

definitely on this subject. On June 14 last, at the reunion of the *Fédération des Mutilés,* presided over by Monsieur Maurice Barrès, Monsieur Justin Godart, Under-secretary of State for the Military Medical Corps, read the following declaration:

"It is the wound and its consequences," he said, "which determine the pension, and not the social situation of the wounded. For the same wound, the same pension is due to rich and poor; even if the poor man should become rich, either by work or inheritance, the State would continue to pay him his pension, because it is a sacred debt, never to be cancelled, the price of blood and suffering. The maimed soldiers have therefore nothing to fear, as regards their pensions, from learning a trade or the profitable exercise of it."

This is clear, precise, and worthy of a generous nation like France.

On January 15, 1916, in a lecture which I gave at La Panne, under the auspices of Dr. Depage, I was expressly authorized by our Minister of War, M. de Broqueville, to make a similar declaration in regard to our Belgian soldiers.

In spite of this we understand that in countries where there is no obligatory re-education the maimed soldier proves recalcitrant. Some are, perhaps, ignorant of the intentions of their

government concerning them. It would therefore be useful if the press, especially the papers which have an extended circulation and which treat particularly of the private interests and daily needs of their readers, should make those intentions known and often allude to them. The special papers published by the Allies for the soldiers at the front should print them frequently and in conspicuous lettering. Doctors and nurses in the hospitals should be requested to repeat them often to the wounded.

The working man is more or less of a fatalist. He has a tendency to let things drift and to sacrifice the future to the present. The wounded soldier, coming out of the hospital and being definitely recognized as unfit for future military service, returns to his home. There he is coddled and pampered and rejoices that he has escaped death and returned to his familiar surroundings and old ties. He lives from hand to mouth on the allowance made him by the State, and little by little becomes accustomed to doing nothing, waiting for the pension which seems to him like some heavenly manna, and greedily calculating the interest. Poor man! The awakening will be terrible if he does not prepare himself to supplement his pension with regular wages. The best that can happen to him is to get some easy, poorly paid work,—intermittent work, such as is usually given to chil-

dren or old men. But he will then find himself irrevocably doomed to poverty and he can never be more than a bit of wreckage cast up by the war. In the country and in small provincial towns where, as M. Gabriel Hanotaux says, life is slow, and there is no hurry, there is no one to urge the crippled men, stranded there with their families, to re-apprentice themselves. If here and there some generous soul is occupied with their fate, his protests generally fall unheeded before the inertia of the maimed soldier, who has no longer the energy to tear himself from those surroundings in which he will remain fixed until the end of his days.

There is only one conclusion to be drawn from these premises: it is to the interest both of the maimed man and of the nation that he should recover his productive faculties entirely or in part; but through calculation, unwillingness, ignorance, or laziness, by far the greater number refuse to permit themselves to be re-educated. Their conduct is therefore in complete opposition to their own interests as well as to the interest of the State. Under these circumstances has not the State the right, or even the duty, to force these men to learn a new trade which will permit them to earn a wage that, joined to their pensions, will secure them against want? Why protest? Does not most social legislation limit the liberty of the indi-

vidual for his own benefit? Consider the laws regulating workmen's insurance, compulsory education, obligatory military service. This last law, which rules that it is the natural obligation of every man to defend his country, permits the State to send hundreds of thousands of its citizens to their death, in order that the nation may live. Why, then, shall a law not have the right to send to a social and economic resurrection those soldiers who have been struck by the enemy but spared by the great reaper? Let us lay aside all useless sentimentality. Let us save the maimed from social downfall, if necessary in spite of themselves. Let us force them to be re-educated.

Following a trial by court martial which recently took place in France, the Committee of Public Hygiene of the French Chamber of Deputies adopted by a unanimous vote on August 4, 1916, the following resolution: "The committee, after having heard the report of its delegates charged with studying the employment of certain treatments, is convinced that soldiers have no right to refuse examination and electric treatment which is not dangerous. By their refusal to take treatment, they run the risk of being disciplined."

On the same principle, but with more reason, one can require the soldiers to be re-educated. I say with more reason, for the treatment which

the Committee of Hygiene defended, the famous *torpillage* of Dr. Vincent, inflicts a certain physical pain on the patient for which the only excuse is the favorable result to be obtained. But the vocational re-education is a gentle treatment, a work of time, during which the pupil is provided with every physical and moral care his condition requires. It is a slow cure, agreeable and relatively short, which will have the most salutary effect upon the remainder of the life of every one who submits to this re-education with ardor and good-will.

We are, then, earnest adherents of the system of obligatory vocational re-education, particularly as this reform is easy to realize. M. de Broqueville, Belgian Minister of War, has proved this, by introducing it for the Belgians. He decided as early as November, 1914, that soldiers who on account of their wounds would be unable in the future to practice their pre-war trades or vocations should not be discharged but simply declared *Candidats à la Réforme,** and kept on the army roll in order to be sent to a school of re-education. They preserve their military status, and are subject to all military laws and regulations.

This measure has not evoked any protest from us. All the Deputies with whom I

* Candidates for discharge for reasons of physical disability.

have spoken, amongst whom are members of our three great national parties, have expressed themselves as satisfied with the measure. They are extremely opposed to the retention at the rear of soldiers unfit for military service but capable of pursuing their former trades, but they agree with the Minister of War that a soldier who is incapacitated for his previous occupation must give the leisure imposed by the war to an apprenticeship to fit himself for new conditions.

The men submit with good grace and after a few days at a school they are so happy there that they no longer desire to leave it.

It is true that the occupation of the greater part of our territory makes this new rule more easily accepted because it is practically impossible to send the men back to their homes. At the beginning of the war, after the battle of the Yser, when the field hospitals were crowded and we had not yet had the time to establish base hospitals, a great number of maimed soldiers were discharged. Those who were well enough and who wanted to work easily got employment, but others, crippled by their wounds or completely demoralized, wandered through France and England, ragged and miserable, begging for food and clothing.

It was then that the Minister of War issued

the order which we have mentioned above, namely that all discharged soldiers should pass another medical examination. Discharge papers were annulled. Soldiers needing vocational re-education were sent to schools of re-education; those who had found honorable occupation were permitted to remain in their positions and were listed as on leave without pay, while the wanderers were directed to the Dépôt des Invalides at Sainte-Adresse. All were declared *candidats à la réforme* but remained subject to military discipline. This measure was necessary as the Belgian Government particularly desires to reserve the right to call back to camp any Belgian soldier on leave who misbehaves himself or becomes a subject of scandal in France.

In England, where many men had been sent from the hospitals of the Belgian coast, after the fall of Antwerp, at the moment of the German attack on the Yser, the situation was still more serious. The Belgian Government began by giving two shillings a day to all the discharged men who resided in Great Britain. Later it sent committees there who examined each case. The greater number of the men had found remunerative occupations. Those who, according to the formula we have already employed so often and which we shall use again, badly needed complete vocational re-educa-

tion or vocational re-adaptation were sent to our schools at Port-Villez near Vernon (Eure) or at Mortain (Manche).*

We have also a rather important colony of maimed soldiers in Holland at Katwijk, where the Minister of Arts and Sciences, Monsieur Poullet, has founded for their benefit a home with vocational courses.

Even in the occupied part of Belgium, some enlightened compatriots are busy ameliorating the fate of the maimed, and several institutions are working to the satisfaction of their founders. They have charge of victims of the first combats at Liège, at Haelen, and of the retreat of the army to Antwerp, who were left in the hospitals in Liège, in Louvain and in Brussels after the German occupation.

Naturally in the beginning there was indecision. The disorder caused by the invasion did not permit us to regulate without delay the status of the maimed. But we can say that since November 5, 1914, no soldier coming out of the hospital, maimed and in need of vocational re-education or re-adaptation, has escaped our beneficent action. This is a result which Monsieur de Broqueville can proclaim with legitimate pride.

I hope, and I have every reason to believe, that the obligatory system of re-education

* On October 1, 1916, the School at Mortain was united to that at Port-Villez.

will be maintained after our return to Belgium. In a few days a commission will meet at Sainte-Adresse, which will have several ministers of state as members, and which will be charged to fix the status of the discharged Belgian soldiers; I am sure that it will confirm the radical but beneficent decision of the Minister of War. We believe that the Entente nations will make a mistake if they do not pursue the same course. It is the only way to obtain a satisfactory result. The necessary measures are easily taken. It will be enough to order that no maimed soldier shall be discharged before he is vocationally re-educated.

My French friends have objected that, for them, the problem is not the same, because so many maimed French soldiers have already scattered through the country that it would be impossible to recall them for re-education. Certainly it would not be practical to legislate for the past, but the more I examine the problem, the stronger becomes my idea that obligatory vocational re-education is a great blessing. Those who would come under this obligation would be, in my eyes, privileged persons, and as the law would authorize all the maimed and crippled to profit by the advantages it decrees, equality would not be destroyed.

Perhaps the maimed are afraid of again submitting to military discipline, with its small

annoyances, and, let us say frankly, its petty, and sometimes even mean, bickering and teasing, which have nothing in common with true military discipline, but are the result of lack of discretion on the part of some under officer. In order to prevent mistreatment of the maimed, it would only be necessary for the Minister of War to give proper instructions, and to place at the head of the establishments of re-education good civilian instructors, and, to back them up and maintain a paternal discipline, officers well known for their altruistic sentiments, and their devotion to their subordinates. In the chapter which treats of the choice of men, we will develop further our ideas on this subject.

During a recent journey in Italy I had the pleasure of visiting the magnificent establishment for re-education at Gorlo, near Milan, which much resembles our school at Port-Villez, and made the acquaintance of its excellent director, Professor Galeazzi. He also is an earnest adherent of obligatory re-education. In the absence of all regulations he simply uses his authority to refuse a discharge to men who, in his opinion, are in need of learning new vocations or of re-adapting themselves to former ones. He has not encountered more than ten per cent of refractory subjects, and many of these, seeing the progress of their comrades, finally consented to frequent the work shops.

## CHAPTER III

### The Advantages of an Obligatory Vocational Re-education

The first advantage of this measure would be to put in the hands of the State the control and coördination of all the means which are at present employed for the benefit of the maimed. Good intentions are not lacking, but it is most regrettable that owing to lack of comprehension of the needs of the maimed, so much money, effort, and generosity are expended without result. Often the men are occupied with trades which will not be remunerative after the war or will disappear with it. Thus, in England, our men are taught to knit socks by machine. In another place they make fancy baskets. Why not teach them a serious trade capable of supporting them? Sometimes charitable people, animated by the best intentions, found schools without knowing exactly what they are about. They devote energy and money to these associations, but unfortunately the results do not correspond to the effort expended.

We believe that the State should be the great controller of the institutions for the maimed,

because it is their natural protector; but this does not mean that it should absorb all these institutions.

The State would create vocational schools, seminaries, agricultural centers, and at the same time aid with advice and funds every serious effort to assure real re-education for its maimed soldiers. The re-education should be obligatory for the maimed but, as they are free citizens in a free country who have fought for liberty, the men should choose for themselves among the establishments authorized by the Government the school which they wish to attend. Thus healthy competition would stimulate all the schools to organize their courses thoroughly in order to merit the confidence of the scholars and the public authorities. Considering the variety of the national activity it is indispensable that diversity of conception would give birth to diversity of schools.

In Belgium,—Belgium in exile, you understand,—we have two kinds of schools. There is the *Dépôt des Invalides* at Sainte-Adresse, founded by Monsieur Schollaert, President of the Belgian House of Representatives. This is a private institution, but powerfully aided by the Belgian State. The Departments of War, Arts and Sciences, and of Public Works, give it subsidies and raw material; but the direction belongs to M. Schollaert and he fixes the

courses of study, and decides on the expansion of the workshops. The profits of the industrial enterprise make it possible to pay the men a wage. Here is a typical private institution, subsidized by the government. A complete military staff maintains discipline and assists the directors to run the establishment. The school of Port-Villez near Vernon on the contrary was founded and is supported by the War Department. We shall not here enter into the details of its organization as the readers will find a full description farther on.

A second advantage of the obligatory system is that it prevents the men, on leaving the hospitals, from drifting into bad company, or risking by contact with every day life the loss of those beautiful moral qualities which sustained their souls in combat. When the soldier comes back wounded from the field of battle, especially now when the scales are tipping more and more to the side of the Allies, as the French President said in his letter to the army, his state of exaltation is such as often to bring tears to the eyes of the civilian at the rear. The love of country, the spirit of self sacrifice burn in his eyes bright with fever. Little by little he becomes calm, but his morale remains at the high water mark.

Much precious time would be saved if the staff of the hospital could familiarize the

wounded man during his convalescence with the idea of undertaking a vocational re-education. The men would come out of the hospital on fire with enthusiasm for a work which would render their lives independent despite their mutilation. Thus their re-education would profit by their high moral tension, which it is a pity to diminish. This is not sentimentality nor the amplification of a generous conception. It is the fruit of our every day experience. The soldiers who come to us straight from the Belgian hospital at Rouen or from a hospital at the front are more inclined to work than the men who have dragged about in convalescent hospitals or in English homes.

For instance, the man who has long been helpless from an injury to his legs feels a real need of activity and work which we seek to satisfy. To satisfy this need for activity we have founded the *Oeuvre du Travail des Blessés Belges,* which was recognized by a ministerial decree on October 20, 1915. Its object is especially to give diversion, and at the same time a small pecuniary benefit, to the wounded soldiers. This institution supplies them with the means for making basket-work of raffia fibre (a very clean occupation which does not soil their bed-clothes) and takes charge of the sale of the objects made. The profits are turned in to the fund for the maimed which is also sup-

ported by gifts and subscriptions. The Minister for the Colonies, Monsieur Renkin, has kindly had twenty bales of the precious fibre brought from the Congo at the expense of this department. At Rouen, in the hospital of Bon-Secours, which is managed unusually well by Doctor Marneffe, workshops have been arranged for the convalescents in order that they should again get into the habit of working. There numerous beginners make toys, and baskets, or plaster casts, and do carpenter work.

Let us not allow the enthusiasm of our soldiers to cool; let us carefully avoid tarnishing their moral beauty by contact with deceptive realities. Certainly it would be cruel to deprive the men of the pleasure of visiting their families. They should have two weeks leave, during which they would not have time to become demoralized or to contract idle habits. On the contrary these weeks would be entirely consecrated to the joy of seeing each other again and lighted by the hope of a future full of promise. The men would return gaily to work and the tears which their families shed at their departure this time would not be bitter tears, mixed with anguish by the haunting fear of battle, but only the tender tears caused by a temporary but necessary separation. The spectre of danger will not rise up behind the men, as at the time when they went

to the murderous trenches, but the angel of peace, promising hope and happiness, will appear beside them, showing them the way to the school of redemption. And if the man knows in advance that his departure for an institution of re-education is obligatory, that it is imposed upon him for his own benefit, he will submit to the temporary separation with good grace and in the same spirit of discipline with which he formerly returned to the front. For his family the new privation is light compared with the sacrifice and anguish of the past. Moreover the State will continue to assist the family, as it did when the man was mobilized for war.

Obligatory re-education saves much time which would otherwise be lost in indecision. Already the first maimed and crippled who began their re-education on quitting their hospitals have finished their apprenticeship and are gaining wages which are the more remunerative, as, with all the best workers still at the front, the demand for labor vastly exceeds the supply.

Let us profit, then, by this period of enforced suspension of ordinary commerce and industry, in order to prepare the maimed to practice new trades. Then on the day of victory they will be ready to render the greatest services to reviving commerce. After having

shed their blood on the field of battle for the defense of their country and civilization they will help to rebuild their devastated homes and they will prepare along with their able bodied brothers precious triumphs in economic fields.

I am inclined to believe that many soldiers will voluntarily submit to obligatory re-education if only for the honor of wearing their uniforms until the end of hostilities. Very often crippled Belgian soldiers in well paid civilian positions ask to be taken back into the auxiliary service of the army, solely with the view of returning to their country in the glorious uniform of our troops. A maimed soldier with a decoration pinned to his uniform is a glorious being whom the civilian regards with respect and to whom he shows consideration. Without the uniform the man with an empty sleeve or with a pair of crutches, even though he wear on his breast the cross of the brave, is only a poor wretch who excites pity. And the soldiers of the Allies, the French poilu, the British Tommy, Canadians, Australians, or Belgian piottes, as well as their Russian, Italian, Serbian and Roumanian comrades are much too fond of "swanking" not to fel this difference sharply.

## CHAPTER IV

### The Method of Directing the Choice of Occupation

As we have said in the preceding chapter, valuable time would be gained if the doctors and nurses would familiarize the wounded men with the importance of re-education, while they are still in the hospital. The governments concerned might provide the hospital staff with precise data concerning the institutions for re-education in the various military districts. The staff could then supply the men with a mass of information which would give them an elementary idea of the possibilities offered them. During the long wakeful hours in their narrow beds, they could reflect upon the choice of a new trade and calculate their chances of success in one line or another. Old dreams and tastes take form again and the maimed men would soon be interested in the plans for a new future and anxious to realize them. The doctor, when he has the opportunity, should question the man concerning his tastes and guide him in his choice, explaining to him the limitations caused by his particular injury.

As soon as their wounds are healed, those

men who are definitely unfit for field or auxiliary military service should be sent to their own county town, for it should be a fundamental principle with those who are directing the re-education of the maimed not to uproot them, but to leave them as far as possible in their former surroundings. In the county town they would be examined by a committee of specialists, competent and conscientious men who understand the importance of their task, and realize that a mistake would have a lamentable effect upon the destiny of a human being.

There are those who believe that the direction of the choice of vocations for the maimed lies entirely in the domain of the doctors. We are not of that opinion. A man is not only an organism with arms and legs, but a being endowed with intelligence and sensibility, with passions and tastes, with likes and dislikes, and especially with free will. He is, besides, a being with a fixed habitation, and it is for the common good not to disturb him. As a general rule, the doctor should interfere only in a negative sense, in order to indicate those vocations which are barred to candidates with a certain kind of injuries. The choice of the trade after that should depend upon the tastes and aptitudes of the man himself, upon his probable success in this particular vocation in the locality where he intends to settle, and

finally upon his intellectual development—for there are trades which demand a certain amount of positive knowledge. In addition to an experienced and benevolent doctor, I should like to see these committees composed of an old local magistrate familiar with the psychology of the people of his region, a director of a vocational school accustomed to give advice to young men about the choice of a career, and finally a successful business man or shopkeeper, well informed concerning the resources and needs of the neighborhood. We want no worn out office holders who regard their mission either as a task or as a sort of joke which must not take too much time.

These committees should examine conscientiously the case of each man. If he is able to continue his former vocation in spite of his injuries, they should immediately send him back to civil life. They should only keep those who must learn a new trade in order to earn their daily bread. The professor should question them to learn the extent of their instruction, the business man should discuss the chance of financial success in the prospective vocation, then the doctor, having first made the necessary physical examination, should place his approval or veto upon the choice made. In the latter case the members of the committee should endeavor to assist the man in choosing

another trade. The decision made, the man should be informed about the various schools where he may pursue his apprenticeship. He should then be sent to the one for which he has expressed preference. I have already asked myself if it would not be possible to make up a table indicating the principal kinds of injuries and the most appropriate trades for the case, but after mature reflection and repeated discussions with the doctors of Port-Villez we have concluded that such a table was inopportune, if not impossible. Our medical service has even abandoned its classification of "seated" and "standing" trades.

Some people maintain that as far as possible the maimed should be trained to practice their former trade. They base their theory upon economic considerations. It is for the interest of every one, they say, to leave the men in familiar surroundings and it is possible that the choice of a new trade would necessitate a change of residence. Besides they fear the overcrowding of certain trades and an insufficient supply in others. We believe that these fears are unfounded. To begin with the vocations are not strictly localized and the trades are so varied that in a short time a sort of equilibrium will be established in the number of recruits to each of them. Especially we must not lose sight of the fact that death has mown

down all ranks and that there will be no overcrowding. The man should, without doubt, be re-educated in his former trade if the nature of his injury permits. Certainly let us follow this advice, if the former trade is as lucrative as those which may be easily learned in the school of re-education; but we do not hesitate to counsel a man to exchange unskilled for skilled labor. Above all the tastes and preferences of the man himself should be taken into consideration.

Experience has taught us that when a man is unable or does not wish to take up again his former trade, his choice generally falls upon one in some way connected with the old occupation. A mason or a carpenter will choose the vocation of draughtsman or architect's clerk. A stone-cutter wishes to be a dresser, a smith aspires to be a designer of artistic iron work. A moulder who can no longer lift the heavy moulds will try to become a modeller. A house painter who can not now climb on scaffolding naturally turns to the painting of signs and advertisements which can be prepared in a workshop, or perhaps to the decoration of china. A hair dresser who can no longer endure long hours of standing will become a wigmaker, and a joiner can still manage the mechanical tools in wood-work. Farm hands or cowherds who have lost their

legs become market-gardeners and farriers turn to lathes or to fitter's work.

We have noticed that the nature of the injury also has an influence upon the choice of the trade. Men who have lost their legs have a marked preference for shoemaking, harness-making, basket-making, tailoring, book-binding, and even desire to become chauffeurs. A man without an arm chooses rather to be a painter of labels, an imitator of woods and marbles, a polisher in cabinet work, or a pyrographer. With an artificial arm a man can even learn the art of diamond-cutting.

One of our compatriots, a distinguished engineer, proposes fitting up a shipyard on the Seine between Havre and Rouen, which will be transferred to Belgium after the liberation of our country. He intends replacing the riveter's hammer by an electrical tool which could be managed by a one armed man. The tool would be worked by the good arm and directed by the stump, to which could be adapted eventually a special working apparatus. This engineer and philanthropist has offered our Minister of War to experiment with metallurgists who have lost an arm, and he is sure that the experiment will prove successful.

Very often the choice of a trade is determined by old preferences. A year's work at Port-Villez has resulted in the discovery of many

hidden talents and shown how often an unsuitable vocation is chosen for our children. This also should be changed after the war. The schoolmasters should be instructed to find out the natural aptitudes of the children. The organization of manual training during the last two years of school life (that is, of scholars of 12 to 14 years old) as the Poullet law of 1914 foresaw, will render a great service to the country in this respect.

Here are some typical examples which show the importance of taking into consideration "natural preference and aptitude" in the apprenticeship for a new trade. A restaurant waiter with his right hand so crippled that it was impossible for him to handle bottles and dishes, and who had a dreadful handwriting, found himself drawn to painting letters for signs. He had a sense of color and elegance of form; so that after six months of assiduous labor he has become a first class workman, and recently got profitable employment in Rouen. A circus clown, who had never held a brush, unless perhaps to paint his face, has become an ornamental painter. His decorative designs, though somewhat strange—one would say that his new art has kept something of the burlesque—show a strong sense of harmony. It is a remarkable thing that once he has commenced a drawing in a certain style, he never

varies from that style until the work is completed, though he has no notion of the history of art. An apprentice in the glass painting shop, whom the instructor had at first put at mounting the pieces of glass in lead and who was making no progress at all, asked to go into the section of painters, and is now one of the best pupils in this section. A drayman with a badly damaged elbow has made astonishing progress as a wigmaker. A stone cutter has become a finished penman and has commenced to learn lithography. His instructor finds that he has real talent. A navvy who has lost the use of his left arm shows great facility in imitating all kinds of wood and marble. In three months he has become so expert that from now on he can earn good wages. There are at least a dozen of his workshop comrades who are remarkable cases. A sailor who has lost the use of three fingers of one hand, after three months study produces really superb panels. A brewery workman whose left hand is completely paralyzed and who has been in the workshop only two months, shows such taste and skill that his instructor is amazed at the progress he makes. It is generally believed that it takes years to make a tailor, but some of our apprentices of less than a year would be considered good workmen. A former telegrapher has applied himself with such ardor to cut-

ting and sewing that he already prepares and finishes whole garments. A professional cyclist who has been forced to renounce racing by a ball in his lungs, has taken up toy-making, and in less than two months and a half he has learned to make toy wheelbarrows, bird cages and fancy articles. In the shoeshop all the visitors are astonished by the work of a one-legged man, a smith before the war, who in three months and a half has learned to make shoes as well and as quickly as the average workman. An injury of the left elbow makes it impossible for a confectioner to pursue his former trade. He wanted to learn the work of a fitter, but feared that his injury would interfere. Nevertheless he persisted and succeeded so well that after six months he was allowed to do work requiring the greatest precision.

A man who could not continue in his trade of cabinet-maker, on account of a serious wound in his left arm, became a furrier's apprentice. After five months' instruction he can mount and sew cravats, stoles, and muffs, and is now able to earn seven or eight francs a day.

One poor boy whose pelvis was traversed by a bullet showed extraordinary courage in overcoming the pain caused by hours of standing; but he was determined to become a maker of wooden shoes—he was a miner before the war—and, after an apprenticeship of three months

and a half, he is doing the most difficult work perfectly; planing sabots. In two months more, he will be a finished workman.

The reader will ask how we discover these latent talents. Our method is as follows.

When the men arrive at Port-Villez, they are at once given a thorough physical examination, the results of which are entered on their certificates. This examination allows us first of all to determine what special therapeutic care is needed by the men, whether they need electric treatment, mecanotherapy, massage or orthopedic gymnastics, whether fencing would be useful to them, whether they must learn to walk normally again; and all these cases are provided for, and all these special treatments are regularly applied under the direction of doctors, gymnastic teachers, and orderlies, The doctor then forms an opinion on the impossibilities and, consequently, on the possibilities of their re-apprenticeship.

Then the new arrivals go before the pedagogic directors who enquire into the extent of the general instruction of each man. This examination is necessary not only to group the men in classes, but also to enable us to guide the men's choice judiciously, for certain trades require a rather extended instruction as well as a quick intelligence. Finally the candidates for apprenticeship are examined by the

technical director, Captain Haccour, a connoisseur and a trainer of men, who loves the workmen and is loved by them and who thoroughly understands their psychology. He takes them for a tour of the workshops, where forty-eight different trades are being taught. This personally conducted tour of the workshops is characteristic of our method; the men are greatly interested by trades of whose existence they were often entirely ignorant. The spectacle of their comrades at work, happy and contented, inspires a desire to join them, and as the various forms of work are passed in review they sometimes feel stirring within them aptitudes heretofore unsuspected; dreams caressed in youth take shape, and they say like Correggio before Raphael's St. Cecilia, "I, too, am a painter." The visit to the workshops lasts sometimes for two days. The new men mingle with the workers, talk with them, and with the superintendents. Then they are called one by one before the Committee consisting of the heads of the three Departments of the Institute, the medical director, the pedagogic director and the technical director. These gentlemen consult their individual notes and then decide, in agreement with the man himself, upon the shop in which he will make a trial. I say a trial, since, if the man does not show the necessary aptitude for the trade chosen, steps

are taken after one week to find another employment more suitable for his capacities. It is very rare that a satisfactory result is not quickly obtained.

The reader will therefore see what a mass of precautions are taken to prevent making a false start. The maimed man has no time to lose and it would be criminal to set him at a trade which does not suit him. Therefore, it is necessary, as I said before, and must again insist on, that the crippled soldier should be directed in his choice of a new trade by conscientious men, who love their neighbor as themselves, not by cold martinets in whose bosom a presidential proclamation or a resolution of the committee takes the place of a heart.

# CHAPTER V

## The Different Kinds of Schools for Re-education

One of the fundamental principles of primary instruction in Belgium is that the schools should be adapted to local needs. We have never worshipped the fetish of uniformity which would pour all the schools, as well as all the pupils, into the same mould, as if the needs of one region did not differ from those of another—even of one parish from the next. We would not have applauded Monsieur Duruy, Minister of Public Instruction in France, when, watch in hand, he announced with pride "At this hour every school child in our public schools is doing his French composition."

In school organization one should never lose sight of the fact that schools are made for pupils and not the pupils for the schools, and that instruction should be adapted to their aptitudes and to their economic needs. If this is an undeniable truth for permanent schools, how much more so is it for those institutions which are opened because of extraordinary circumstances, and which will cease to exist when the cases for which they were organized shall no longer have need of their aid.

It is therefore impossible to fix regulations or to make out uniform programs in advance, for the schools organized for our maimed soldiers. The important thing is to get to work quickly, to lose no precious time in useless discourses. It is better, after having considered the probable expansion, to begin teaching at once and to perfect them as we go along. We have followed this course at Port-Villez. On July 11, 1915, we commenced to break ground and on August 1, with only a tenth of our buildings up, we received our first contingent of pupils. During another year we continued to extend our buildings, to divide and increase our workshops; and even now we should not like to say that the school is complete. This has not prevented us from devoting the greater part of our time to the re-education of our pupils, and at the present moment a certain number have already left our roof to gain their own living by means of the new trade which we have taught them.

Our extensions and the fitting up of new workshops have often been inspired by the pupils themselves. Our school is literally made to order—fitted to our scholars. We set out simply with an outline. The details have been dictated by circumstances. I believe this to be the proper method to follow in all war work.

Let us now examine the kind of school to

which we should give preference. There are two kinds—the little school which teaches one or more specialties and the large school with many sections, a kind of camp where a great number of men are assembled. Both are good. The maimed to be re-educated are so numerous that no efforts should be discouraged.

We Belgians, exiled from our country, have had to create a small number of large schools, such as those of Sainte-Adresse, Port-Villez and Mortain.* We believe that if an institution of re-education is to be founded by a powerful society such as the State the large school is preferable, as affording a greater choice of vocations to the candidate for re-education. It also permits the man who has made a false start to begin again with the least loss of time. The economy in running a large school should also be considered.

Where should these large schools be placed? In the city, or in the country? Where there is a choice we should prefer the latter situation, and establish them in a rural spot, some beautiful site which appeals to the eye and tranquilizes the mind. When our nerves are shaken by too much hard work, or when we are overcome by grief, we fly from the city with its noise and bustle, and turn to country life for the quiet and repose necessary to restore our

* Annexed to Port-Villez October 1, 1916.

equilibrium, our physical vigor, and our self control.

For the same reason, a cure of light and air is beneficial to our poor maimed soldiers, embittered perhaps by suffering. Life in the country is good for them. Tranquility and regular work quickly restore their self control. The beauty of the place appeals to them in spite of themselves, and they involuntarily feel its charm. Their mental state reacts upon their physical, and vice versa.

A large city is not the proper place for our crippled soldiers, who are in an abnormal physical condition. "They find too many fatal distractions there. There are also too many people who pity them, and give them bad advice, thus prolonging, without meaning to, their physical and mental suffering." "The large city is too favorable for disastrous idling; the high walls of the barracks do not keep the men inside; when the time comes to stop work, an irresistible force pushes them outside. A taste for work is not reborn in such an atmosphere, and this taste for work is the first condition of all vocational re-education."*

Too lonely a spot should not be chosen, for the maimed would feel completely isolated,

* Lecture given by the author: "The Vocational Re-education of the Crippled and Maimed of the War, and the National Institute, Port-Villez, Vernon."

and might perhaps think they were being punished. It is good for them to hear the sounds of economic life near by, and in their free time they can find legitimate diversion in a neighboring town. Experience, however, has taught us that a certain degree of isolation intensifies their desire to work. The man who lives at the school is plunged in a bath of work. His attention is not distracted by the thousand and one petty details of the outside world. A crippled man who lives at home naturally divides his thoughts between his lessons and small family incidents. We have also proved that leaves of absence between the regular vacations are very injurious to apprenticeship; these absences constitute a real interruption of study.

As for our traditional vacations at Easter and in August if not too prolonged, they seem necessary, not only to give the men an opportunity to see their families, but also to give a short rest to the instructors and directors. Getting to work again after a rest of several days always causes a certain loss of energy; the machinery does not start again without some jarring, but soon, if the directors have things well in hand, the school resumes its normal aspect.

This does not mean that I condemn the city. I have simply expressed my preference. For if the city has its disadvantages, on the other hand it offers great advantages, which should

be made the most of. There are large buildings, left vacant by the war, where a large number of crippled soldiers can be accommodated. Persons who can take charge of the soldiers' re-education are more easily found, and there are medical institutions which can give them the care their physical condition requires, for their re-education, as we have already remarked, should, as a rule, begin as soon as their wounds are healed. In the large cities, also, an organization could be adopted, to utilize the existing work-shops, which would be a great economy.

There might be, for example, one or more central homes, where the crippled men would have board and lodging, and a recreation hall, also some rooms for classes, where specialists could teach them the technique of their new trade, and where classes of general instruction could be organized for those who need it. Two mornings a week could be given up to these classes and to theoretical courses, such as geometric design, industrial design, and ornamental design, if the trade they are learning requires a knowledge of these branches. The remaining time should be given to practical apprenticeship in private work-shops approved by the directors. They would have an agreement with the proprietors of factories, or with a committee of employers, by which the latter would place a corner of their workshop at the

disposal of the pupils, so that they could learn the practical side of their trade. In most cases, the individual employer, or the committee, would furnish the instructor and the raw material free, and would also lend the tools. Perhaps they would even consent to pay these crippled apprentices a small wage, which in the beginning would serve to encourage them, but which would soon represent the value of services received by the firm.

Would not this be a magnificent contribution by these employers to the work of re-education of the maimed? I am sure that many of them give large sums to maintain institutions which, alas! too often go to pieces because of lack of coördination. Would they not render much greater service to the community, if they gave, instead of money, the intelligent collaboration which I have just outlined?

Printing, clothing, and shoemaking firms could help our pupils, and the furriers would surely follow their example, if asked to do so. I know personally a Belgian furrier with a large establishment in Paris who has offered to take as apprentices half a dozen crippled men. These men must still possess both hands; one of them, however, might even be reduced to the grip (i.e. thumb and first finger). Furrier's work is very remunerative and had become a German specialty, so there are good

openings in this trade for skilled workmen. I could mention other trades, such as watch-making, jewelry, diamond-cutting, the manufacture of optical instruments, etc.

The maimed who can still walk could go to their work on foot, or in the street car. The street car companies would, no doubt, be glad to give them passes, or even reserve special cars for them at certain hours as is done in Brussels for the postmen going out on their rounds. Those soldiers who have lost a leg could be taken to and from their work by a motor-bus.

The director of the home and his assistants should watch the apprentices closely, and regularly inspect the workshops, thus assuring themselves that the practical studies are progressing favorably, and that the pupils attend these classes regularly. Frequent inspection would also prevent eagerness for industrial production from interfering with normal development of the apprentices.

The director should be a man of educational experience, acquainted with the methods of technical instruction. At least once a week he should assemble the foremen and superintendents who have charge of the practical education in the different work-shops and confer with them about their technical courses, the arrangement of the subject-matter, and the rules

to be observed in explaining the lessons; also about the progress of the pupils and any improvements to be made in the institution in general.

There should be recreation halls, reading and writing-rooms for the use of the men during their free time. Concerts, or literary or dramatic entertainments should be organized for their amusement. Lady-patronesses should visit them regularly and try to create for them a homelike atmosphere.

I have thus briefly set forth my idea of an organization which, it seems to me, might be easily realized at small expense. The State might furnish the houses and pay for the support of the men. If the management is entrusted to men who put aside all idea of profit and take a real interest in the maimed, marvels can be done with daily allowance of about 50 cents per man. We have made the experiment at the *Foyer du Soldat Belge,* 107 Quai de Valmy, Paris, where the Belgian deputy, M. Brunet, succeeds, with very limited means, in giving the men a varied and nutritious diet.

But in order to have an organization like this succeed, it is absolutely necessary to place at its head a man of real benevolence and firm will who is ready to devote to it his entire time. He must have also devoted assistants who will guard the interests of the crippled men and

will be loved by them, for affection is a mighty lever, not recognized by regulations, and often made too little of.

We advise large and powerful organizations, because they command the respect of public and private authorities, and especially because they prevent the scattering of energy.

I believe it, therefore, desirable that all the small institutions in the same city or district should coördinate their activites. Instead of competing against each other by developing along the same lines, they should mutually complete each other by specializing, thus gaining in vigor what they lose in extent.

There should be only a few managing directors. The committees should confine themselves to selecting worthy representatives for these posts, and, within the bounds prescribed by their financial limitations, give these members entire freedom of action, for all progress ceases when every step to be taken must be discussed by the committee. The other members of the committee should help with their sympathy and good influence over the pupils, and also give financial assistance.

Finally, the agricultural schools should obviously be established in the country. If kitchen-gardening, horticulture, and floriculture are taught, it is preferable to be near a town in order to dispose easily of the products.

For the training of shepherds pasture-land is a necessity.

We shall not further discuss the question of agricultural schools, as their organization is very simple. It is only necessary to rent a farm, stock it with domestic animals, put up barracks for the men, and engage capable instructors. Nature will decide the order of work.

Our readers will find farther on an account of the agricultural center which we have established at Port-Villez.

Let us say, in conclusion, that it would be a great error not to make use of the educational establishments already existing—vocational schools of all sorts—which can now easily receive the maimed, as alas! their usual number of pupils will have been so greatly reduced by the war.

# CHAPTER VI

## The Belgian National School for Maimed Soldiers at Port-Villez

### *The School of Trades.*

The school of Port-Villez is situated on a plateau overlooking the Seine about 120 metres above the river level and half way between Rouen and Paris. The site chosen seems to me an ideal one and conforms admirably to the conditions which we have outlined in Chapter V.

From the terrace of the large hall for fêtes which has been built on the edge of the plateau one looks over a lovely landscape. The river winds as if it regretted leaving such an enchanting spot. Fertile fields rise gently from the further bank to the distant horizon.

The country people will point out to you the heights upon which the enemy's cavalry made a brief appearance before the advancing wave broke at the Marne and flowed back again. As one contemplates the richness and beauty which a loving nature has bestowed with such bountiful hands on this fair land of France, one understands with what greedy eyes the barbarians looked down on the fat fields which seemed already won.

On the wooded plateau where the school now stands there is a small group of houses where a few peasants live peacefully, cultivating their fields; but the coming and going of the trains for Paris and Havre, the incessant animation down on the river, give our men the salutary impression that in spite of their isolation they are not detached from the working world.

The site of our school is part of the estate of a compatriot who generously placed it at our disposal. It was covered with stumps and underbrush. It had to be cleared, and it will give you some idea of the preliminary work when I tell you that 25,000 stumps were dug up by our workmen.

The school has the aspect of a vast camp with its 92 wooden barracks with double walls and cement foundations. These barracks are of the same type as our admirable field hospitals constructed by the Belgian firm of Hamon Frères of Paris. They are built in three rows separated by green lawns, gay with ornamental flower beds—the work of our horticultural pupils. Broad avenues of macadam lead up to the barracks. One might imagine oneself transported to some new country in the Congo or Canada, where little towns suddenly spring up out of the forest, so fresh and new and uniform is our settlement.

To the left of the barracks is the great hall

of which we have already spoken, and of which we shall speak again, then two groups of barracks, one for the officers' quarters, with mess and dormitories, the other an infirmary conducted by Sisters, who in ordinary times are attached to Belgian military hospitals. New quarters will soon be erected between the infirmary and the great hall. The first building which our technical department will erect will be for the Auxiliary School of Commerce, Industry, and Administration, formerly the Belgian Military Institute for re-education of severely wounded soldiers at Mortain.

To the right stands a large shed which has been transformed into a hand carpenter's shop. An annex holds a saw mill where the undressed lumber is sawed and a mechanical carpenter's shop which we found already set up by the owner, to which we have added a few supplementary machines. Beside the shed is a garage for motor trucks and automobiles with repairing shops and inspection pits. At the extreme right are the stables and the school for the breeding of small animals.

Before the institute stretches a large garden which is both useful and ornamental. for its flowers delight the eye and its vegetables go to the kitchen. We shall give a detailed description of it when we speak of our agricultural center.

On July 12, 1915, a detachment of Belgian auxiliary engineers, among whom there were many unfit for active service, began to clear the ground, and pull up the stumps, and on August 21, 1915, our first group of pupils came from the hospitals. New contingents have continued to arrive regularly ever since. At present the school has more than 1200 pupils. There is some question of adding a home for invalid soldiers, as well as an educational establishment for war orphans. These contemplated extensions will necessitate the construction of large halls to which we shall transfer the principal shops, and reserve the barracks for dormitories. Most of them are already used for this purpose. The floors are covered with linoleum and the walls painted. The pupils have comfortable iron hospital beds. Thanks to a proper system of ventilation there is never the slightest odor in the rooms. Other barracks have been converted into class rooms, or divided into work shops, kitchens, laundries, bath rooms, mess, and chapel; and the huts are so well planned that they can easily be used in all these different ways. We have dug an artesian well 153 metres deep with an output of 100 cubic metres an hour. It gushes up to a height of eight metres above the level of the road, which will permit us to install a hydraulic wheel working an electric motor capable of

sending a plentiful supply of water up to the reservoirs on the plateau.

So much for the material installation. It is really perfect and does the greatest credit to our technical department.

The interior organization has three distinct departments, each having its own competent and responsible head, the medical department, the pedagogic department, and the technical department. In as large an establishment as Port-Villez a division of the work is necessary. The responsibility must be divided, specialists called in to help the director-general, who otherwise would have to be an all-round genius. When a doctor, for example, has to attend to the details of machinery, order raw materials, make sales of manufactured articles, or draw up school programs, in nine cases out of ten he will not be equal to his task. An engineer would be equally incapable of properly directing the medical department. The three departments should work together harmoniously. A serious and assiduous supervision is moreover indispensable for the coördination of efforts and the removal of elements of discord.

Until the recent installation of a new régime, of which we shall speak later, the general superintendence of the school was conducted by the medical director, Dr. Lejeune, an army surgeon and a man of exquisite tact and broad

knowledge who desired to coördinate all efforts without offending anybody. He has charge of the department of health and hygiene, physiotherapy and medical gymnastics. The extension of the establishment has resulted in a splendid solution of this problem. The three departments have been placed on a footing of complete equality, while a colonel has been named as commandant of the school. This officer has charge of all purely administrative questions and superintends the food, clothing, bedding, and discipline. Thus the three directors can give their entire time to their own departments, without any outside cares.

The place of pedagogic director is filled by M. Alleman, who, before the war, was civilian director of studies in a Belgian army school. Since September, 1914, in fact M. de Broqueville, in order to give the officers and non-coms time for their work of training recruits, and also to modernize the instruction, has replaced the military instructors by civilians. The happy results of this reform were soon felt. Before this, M. Alleman had been professor in an industrial school at Charleroi for twenty years, and had seen there hundreds of workmen, and had the opportunity to study their mentality and their needs.

He is ably seconded in his labors by Adjutant Honhon of the stretcher-bearers corps who

is sub-director in the school of trades. In civil life, M. Honhon is district inspector of primary schools, and has always lived in an industrial community. He has a progressive spirit, and a great faculty of assimilation. His help is the more valuable to us, because in his office of inspector he will in future have charge of the reorganization of our primary instruction; for the Poullet law of May 19, 1914, made obligatory the instruction of every child between the ages of 6 and 14. A course of manual training leading to apprenticeship was also decreed. Unfortunately the war has prevented the enforcement of this law.

M. Verheylezoon is the sub-director of the auxiliary school. He used to be professor at the Athenaeum at Bruges, and is an experienced worker, whose devotion and knowledge are only equalled by his modesty, and he is loved by all his pupils.

The technical direction is in the hands of Captain Haccour, of the Reserve Engineers. Before the war he was principal adjutant of Engineers at the Camp of Beverloo. One of his duties was the maintenance of the barracks for the vast military establishment produced by the universal service law of 1913. He thus became familiar with all sorts of people, and was even President of the Syndical Chamber of Belgian apiarists. But his finest trait is his

knowledge of the workmen's psychology. They all love him, and with a joke or well placed word of encouragement he gets the maximum production.

Both Captain Haccour and M. Alleman are men of initiative who are not afraid of taking the responsibility when the good of the crippled men and the progress of their re-education are at stake. They agree with the late General Galliéni, who said, when the regulations are contrary to good sense, good sense should prevail.

Captain Haccour has as adjutant Lieutenant Doutrepont of the Reserve Engineers. The lieutenant follows in his captain's footsteps; his principal duty is to superintend the apprentices, and we are already indebted to him for many improvements in the organizaton of the different shops.

I attribute a large part of the good results obtained at Port-Villez to the men who have been chosen to direct this institute, and therefore I have spoken of their qualifications in detail. We think the choice of men so important that we will give a special chapter to it.

### *The Medical Department.*

The principal duty of the medical department is the physical re-education of the men, but also, as we saw in Chapter IV, it plays an

important part in directing the choice of a new trade, keeping a record of the qualifications of the pupils and superintending carefully their vocational re-education. It also directs the manufacture of orthopedic apparatus and has charge of the infirmary.

For the medical record the wounded are classified in two divisions. The first comprises those who need no further treatment, having already attained the maximum physical rehabilitation. The second division contains those who still need treatment. They receive a paper at their medical examination, fixing the hours for treatment suiting the physical condition, which they follow during their apprenticeship.

Our doctors have observed that the treatments are more efficacious when the lesion is comparatively recent. This is usually the rule now. Soldiers picked up on the battlefield are treated in stations. As soon as they can be moved they are evacuated to base hospitals, and are often sent to the splendid hospital of Bon-Secours at Rouen. Men who have lost arms or legs receive there the apparatus which they need, and which is manufactured under the direction of Dr. Hendrickx, in special work-rooms opened by him in the hospital Albert I, also at Rouen.

We have relatively few men who have suffered amputation. For our doctors, among

whom are a number of well known civilian specialists, who entered the service in August, 1914, have worked with tremendous energy; and thanks to their knowledge of the latest developments in surgery, they have been able to save the limbs of our sons and brothers from gangrene. Some are crippled, but have, at least, partial use of their limbs.

However, the school receives a good many soldiers wounded a long time ago, who now have ankylosis in an advanced stage. In spite of this remarkable success is often obtained by means of their work itself, and medical and pedagogical gymnastics.

Here is a brief résumé of the different methods of treatment which are used in the school, under the supervision of Dr. Govaerts.

1. Mechanotherapy, with the whole series of apparatus in use, made by the hospital Albert I at Rouen.

2. Electrotherapy, with an apparatus of three posts for galvanizing, and a Leclanché battery.

3. Hot air baths.

4. Medical gymnastics, massage, re-education of the motor nerves.

5. Educational gymnastics, fencing, games and sports.

Mechanotherapy often does not show any results for a long time. It is intended espe-

cially to limber up stiffened joints. Medical gymnastics and massage should be given at the same time. Massage is greatly appreciated by the pupils who realize how much good it does them. All the apparatus for physiotherapy is collected in one building. Another is used as a gymnasium, and contains all the necessary apparatus for Swedish gymnastics, ladders, etc.

Lieutenant Ryon, a pupil of the School of Gymnastics and Fencing at Brussels, has organized a model gymnasium for the School of Trades, especially designed for the men doing manual labor. For the pupils of the Auxiliary School we have had to plan a special system of physical education on account of their sedentary life. We will give the details of this system later.

Lieutenant Ryon has given me the following notes, explaining his methods:

"Physical re-education, from a gymnastic point of view, is divided into two parts; the first is closely connected with therapeutics, and consists of medical gymnastics exclusively for the injured joints and muscles. This requires individual treatment. The other part, pedagogic gymnastics, must be practiced in classes in order to give perfect poise to all parts of the body in a correct attitude, and assure the proper functioning of the organs of respiration and circulation.

"In the beginning the individual method calls only for obedience by the patient, but as he progresses, we appeal to his own volition to develop muscular substitution. This makes the man feel that coördinated muscular work helps him with exercises meant especially to bring the injured muscles into play.

"When the patient understands the reciprocal influence of will and motion, he can easily be induced to go through exercises, especially selected for his case. By daily progressive exercises he eventually succeeds in executing movements which, in the beginning, were very difficult for him. The assistance of the teacher is still necessary at this point to give the patient confidence, and strengthen his will, which sometimes weakens before the repeated and often painful efforts required to attain his goal.

"To train the lower limbs we have had an outline painted on the floor, upon which, after preliminary setting up exercises, the crippled man begins with simple walking exercises and proceeds to more complicated, which finally reestablish equilibrium and locomotion, sometimes seriously disturbed.

"The same principles apply to training the arms. All the initial positions: hands on the hips, on the shoulders, at the back of the neck, on the collar-bone, extension of the arms in different directions, judiciously and methodically

practiced, produce a preliminary limbering up.

"After this, we have suspension with support on the ground; the man does this exercise, making the least possible effort with his arms (as in climbing a pole or ladder, etc.). The patient must do these progressive suspension exercises daily, eventually trying to do them without support. The exercise on swinging poles is a good example; the man, standing, lifts his arms sideways, grasping two vertical swinging poles. The poles separate, and by bending his knees, the man hangs by his arms, until they take a vertical position.

"The preliminary exercises for the head and trunk are bending and rotation. When these exercises are finished, the pupil begins a series of exercises, especially arranged for his injury, for the side, abdomen or back. When all these exercises combined have given the desired result, the time has come for the crippled man to enter the class of preparatory pedagogic gymnastics.

"After two or three months of this treatment, the pupil, having become as normal as could be expected, enters the class of pedagogic gymnastics where the lessons are planned according to the average ability of the class. These exercises are simple at first, but become more and more complicated, and gradually lead up to sports. Each pupil is directed to

choose the sport the best adapted to his physical limitations, and can thus develop the faculties which he still possesses, and definitely establish his physical improvement. There are many sports suitable for crippled men; throwing the discus and javelin, ball games, tennis, fencing, running, jumping, etc.

"We believe that a great deal can be done to train maimed men. After recovering from their operation, these men reach a period when they should begin to use their artificial limbs, but are quite untrained physically. It is as necessary to train their entire organism to function properly, as the stump itself, which is their only means of maintaining their balance in walking.

"The class of maimed men takes a course of educational gymnastics as complete as possible. The pupils also take daily exercises to train the stump. This is our method; at the extremity of the stump we fasten weights, by means of wicker splints. These weights are gradually increased, until the former resistance is obtained. In this way we develop and strengthen the motor muscles of the stump, giving the amputated limb power enough to carry and use the artificial one, which weighs much less than the training splints.

"This treatment gives very satisfactory results. The men who have lost a leg are given

an apparatus and take walks regularly, which enables them to see how much they have gained in endurance. Forty of our men who have had limbs amputated take these walks eagerly, and recently they made an expedition of about four miles."

Physiotherapy and rational gymnastics unquestionably produce good results, but they are supplemented by the constant movements of the pupil during his work in the shop. If he had only the physiotherapic treatment, which puts the injured limb in motion at most half an hour each day, leaving it inactive the rest of the time, he would risk losing the improvement obtained by the treatment. In manual labor, however, the wounded man moves continually and almost unconsciously his injured limbs, thus assuring good circulation, preventing atrophy, and contributing to as complete a recovery as is possible for him.

Some of our wounded have been much benefited by their work, after other establishments had classified them as being beyond help from physiotherapy.

I will mention one of the most remarkable cases, that of a pupil who entered the school October 18, 1915. Both bones of his right fore-arm were fractured, and the wrist dislocated. The arm had numerous wounds, which suppurated continually. Some bone-splinters

had to be removed, also about two inches of the lower part of the radius. As a result the poor fellow had entirely lost the use of his right hand. There was no muscular power and considerable atrophy. Before the war he had been a farmer and tradesman, and wished to take a commercial course, but had great difficulty in writing with his left hand. Meanwhile his right hand grew worse every day. On the advice of the pedagogic director, he entered the basket-making class, hoping that this work would prevent atrophy and restore the flexibility of the muscles. At first the hand and forearm were placed in a wire splint. This was soon replaced by a leather apparatus ending in a knob which supported the hand. Soon this support was removed, and now only a muslin bandage is necessary to strengthen the radius. Rotation, flexion and half-extension of the hand have become easy, and a special pen-holder enables him to write with his right hand.

The pupils of the Auxiliary School have not the advantage of manual labor. They must attend classes five hours daily and give extra time to study, so it is very necessary to counteract their sedentary life by giving them a modern scientific physical training.

As soon as they are admitted to the school, they are classified in two divisions. In the first, they are given physiotherapy, medical gymnas-

tics, and massage. In the second they have educational gymnastics, fencing, games and sports.

In the first division the pupils have the same treatment as their comrades of the corresponding division in the school of manual trades. It is only in the second division that we have inaugurated the special régime, mentioned before. Two hours a day, from 10 to 11 a. m., and from 3.30 to 4.30 p. m., are given up to physical education. In order to organize class lessons the pupils are divided into groups according to their physical condition. These groups, which average from thirty to forty men, comprise:

First, those wounded in the arm and hand;

Second, those who have an arm amputated, or ankylosis of an elbow;

Third, those with a paralyzed arm;

Fourth, those wounded in the leg;

Fifth, those who have a leg amputated.

The men who have other injuries (of the head, trunk, etc.) are divided among these groups. As there are two well trained instructors, two groups can work at the same time, while the others are studying.

Their progress has been rapid, and most encouraging results have been obtained with certain pupils. Several badly crippled men have already recovered an appreciable amount of power in a limb which they thought was helpless. For example, partial ankylosis of the

wrist and fingers has been remedied by progressive exercises with wooden clubs, beginning with very light ones, and later using heavier.

All the gymnastic classes last fifty minutes and include a boxing lesson, or fencing with single sticks. These exercises have a triple object: to amuse the pupils, restore their self-confidence, and enable those who in the future may be employed as postmen, cashiers, etc., to defend themselves in case of need. All the pupils learn single-stick fencing, those with an arm amputated have lessons in French boxing, those who have lost a leg learn English boxing. Appropriate games are allowed in the gymnastic lessons. Both instructors in the Auxiliary School are excellent fencing masters. About fifty pupils out of the 350 in this section fence with foils, swords or sabres. These exercises are only for pupils with injured arms. The results have exceeded our hopes. Men with their right arm amputated have increased the strength and flexibility of the left arm, acquiring a great deal of dexterity in their fingers. Others have practically recovered the use of a badly crippled arm. For instance, several pupils wounded in the fore-arm who, when they arrived, could only use a pen a few minutes at a time, and could not hold a foil more than half a minute, can now, after two or three months training, take a twenty minute

fencing lesson, and do the required writing in five hours of classes without fatigue. In view of these results, we have decided to pay more attention to fencing.

The Auxiliary School of Commerce, Industry and Administration has also a division designed to train teachers. For these normal pupils we have a course of educational gymnastics, which prepares them to teach in the future physical exercises in the primary schools and preparatory regimental classes. This course is theoretic and practical.

To complete the physical training we have installed at our school warm shower-baths, which the men use regularly.

The medical department also superintends the manufacture of orthopedic apparatus, and studies the labor question. At the head of this special section is Dr. Nyns, son of a well known educator of Brussels, who specialized in the re-education of industrial cripples before the war. On account of a misunderstanding this section suffered a brief eclipse. But, thanks to the intervention of the Commissary-General Bôval, it has been re-established on a larger scale.

We will speak later of the manufacture of orthopedic apparatus. Dr. Nyns bases his manual labor research work on systematic observation of the most interesting pupils in our school, and before long he will doubtless publish his observations and conclusions.

### *The Department of Pedagogy.*

Both general and technical instruction are included in the Department of Pedagogy. Of course it also directs the Auxiliary School of Commerce, Industry, and Administration which was transferred from Mortain to Port-Villez and will be treated of later. The following details concern only the pedagogic section of the School of Trades.

As soon as the School of Trades was organized, we decided to give supplementary courses of general instruction, so that those pupils who had attended school before primary instruction became obligatory in Belgium might have an opportunity to complete their education. We also felt that their physical inferiority should be counterbalanced by mental attainments. Then the alternation of general and practical courses breaks the monotony of instruction and develops harmoniously a man's different faculties.

At first all the pupils have two hours a day of general instruction. They are grouped in twenty-eight classes; eleven for the Walloons, and seventeen for the Flemings. They are taught, of course, in the mother-tongue of the men. Both the national languages are taught (French and Flemish); also arithmetic, with the metric system. This instruction is adapted to the requirements of workmen, and their spe-

cial occupations. Occasionally they are given lessons in history, geography, and civics.

The pupils are divided into three sections: the illiterates, those who have only the rudiments of primary education, and those who have completed a primary course. Fortunately, illiterates are few, but they are not the least interesting pupils. They usually make rapid progress, study with great zeal, and are themselves surprised at their improvement, and delighted when they can write their first letter home.

At the end of the summer term we held an examination in the upper classes, in order to designate pupils eligible for a special higher class. This examination included writing in both national languages and really difficult problems in arithmetic.

The results were excellent. Faults of spelling in the papers were very rare, and the work showed ample knowledge of their mother-tongue.

On account of the progress made we have reduced the time allotted to this special class to one hour a day. A referendum was held to decide which studies the pupils desired to continue, and after consultation with the teachers, the schedule was drawn up accordingly. It is an interesting fact that the Walloons, accustomed to continual intercourse with the Flem-

ish, desired, with very few exceptions, to continue the study of Flemish. In this special higher class a sort of simplified workmen's bookkeeping is taught, also an elementary course of contemporary history, so that the men may understand the cause of the great war, in which they have taken such a worthy part.

The general instruction includes a course in orthophony. Pupils who have been trepanned often have difficulty in pronunciation; one man had great trouble in pronouncing certain syllables, and another stammered an incomprehensible language.

On his own initiative, one of our pupils (who had lost the use of his right arm) undertook the reconstruction of his comrades' impaired speech. He remembered a course in diction which he had taken at the conservatory of Ghent; he designed and had made by the fitter-apprentice little bars and balls of steel, which bring into use, or immobilize certain muscles of the mouth, which should, or should not, move in pronouncing certain syllables. The results are remarkable, for the professor with admirable patience and devotion makes his pupils practice daily their graduated exercises.

The courses of technology, to which we pay great attention, belong to the pedagogic department. Their organization was difficult, for we had to contend at first with the indifference of

the instructors. These good men, many of whom are self-made, did not appreciate the value of teaching the theory of a trade, but when we showed them the advantages of this course, which simplifies the practical instruction and makes the pupils benefit by the experience of the instructors, they were convinced and began to work with zeal and intelligence.

All these classes follow the same plan: first, the study of tools and machinery, setting them up and keeping them in repair, their advantages and dangers; second, the study of raw materials, with their physical, chemical and technical properties, their qualities and defects, also their rational employment and economic use, their origin, conditions of purchase and conservation; third, operations and special methods of handling; fourth, fixing of cost prices and selling the manufactured articles.

The course in drawing, indispensable for wood and iron workers, is given by specialists, one of whom was before the war a teacher at the business college of Charleroi. They teach the same method which for several years has been in use in our industrial and vocational schools: no tiresome theory of perspective, which precedes practical drawing without any transition; but from the very earliest lesson, draughting and the reading of plans in three dimensions.

This method interests the pupils, increases their efforts, and quickly produces remarkable results. In less than three months the fitter-apprentices make excellent sketches of parts of quite complicated machines and work from designs in the shop.

Carpenters make tracings, as well as drawings from a model, and more than one of them after the war will find a place as tracer in a large work-shop.

This course in drawing is not meant to train draughtsmen; it is only intended to accustom the workmen to make a rapid sketch and read blue-prints easily.

It was necessary to train the foremen and monitors of the work-shops to give this special technical instruction. The pedagogic director succeeded very well in this task. He frequently assembled them, indicated the leading principles of method, and gave a practical demonstration of how to plan a lesson. At first he draughted the lesson with them, emphasizing important points and helping to write the abstracts which are distributed to the pupils and copied in their note-books.

Once a week he and the director of the technical department hold a meeting of all the foremen, instructors, and teachers. Sometimes one of them explains a lesson and a general discussion follows. Sometimes they

discuss a technical problem; recently, this assembly of technicians considered the uncomfortable position of a tailor squatting on his work-table, a position which tires many of the crippled apprentices greatly. After an interesting exchange of views they agreed upon a type of table resembling a jeweller's. It was made in the carpenter shop and in a few days it will be tried out. The workmen will use a turning stool, and if they wish to use the sewing machine, will only have to turn around without getting up.

This system, which interests the whole corps of instructors in improving the technical instruction, arouses their interest and produces a fruitful emulation, very favorable to progress.

As we have already said, the pedagogic director takes an active part in the vocational placing of the men. He superintends the apprenticeship, assists in making out the program of practical work, and insists on the observance of sound principles in the method of teaching, principles which apply to work in the shops as well as in the class-rooms. By his constant activity and almost daily supervision of the work-shops and classes he puts the general and technical instruction on an equal footing and makes them help each other.

In short, the pedagogic department concerns itself with everything that can contribute to

the intellectual and moral well-being of the pupils. For we attach great importance to every phase of education of the men. There also seed thrown out by handfuls falls on fertile soil; very little is lost among the brambles or eaten by the fowls of the air.

### *The Technical Department*

The technical department coöperates with the pedagogic department in directing the vocational re-education. The management of the shops, the distribution of work, and the industrial development of the school are in charge of this department; it also purchases raw materials, tools and machines, receives orders, and sells the manufactured articles. The technical department also supervises the building of the work-shops and the extensions made necessary by the influx of pupils; it oversees the manufacture of the furniture and the planting of the gardens, and manages the school-farms. The question of apprenticeship will be taken up in a separate chapter, and agricultural and horticultural instruction will also be treated later. Here, I will speak only of the different trades taught at Port-Villez.

### *A. Wood-crafts.*

There are five apprentices in the *mechanical carpenter-shop;* all were carpenters or joiners

ONE OF THE WORKSHOPS AT PORT-VILLEZ

before the war, but partial paralysis of one arm makes them unable to use jointers, planes, hand saws, and chisels. They are learning to use all kinds of machines with which we have fitted up this important shop; circular and ribbon saws, ordinary and four-faced planes, vises, and turning-lathes. Probably all these pupils will earn higher wages after the war than they did before.

Eighteen apprentices are employed in *the hand carpenter-shop.* They come from the four corners of Belgium, former boatmen, truck-drivers, butchers, metal workers and even some farm laborers; most of them have injuries of the lower limbs. Thanks to the variety of work and the efficient instruction (there is a monitor to every four pupils) they make rapid progress. They make doors, window-frames, benches, desks, chests, cupboards, school furniture, etc. This workshop also includes a section of tool makers. Two of the more intelligent apprentices, who cannot climb ladders on account of injuries, are learning to make planes, jointers, saw-handles, etc. Although this kind of work must be done with precision, the physical exertion is less than in heavy carpenter work; moreover, the tool-maker can usually work at home, which is a great advantage for a crippled man.

*The section of modellers* has three pupils.

They are former molders who are no longer able to handle the heavy molds of the foundries. Two of them have ankylosis of the elbow and shoulder respectively, and the third suffers from a deformed foot.

*The shop for toys and fancy articles* employs ten apprentices who formerly were engaged in such different trades as those of carter, farm laborer, brick-maker, gasfitter, miner and spinner. From the point of view of physical re-education this workshop is excellent; the exertion required is relatively very small, especially as we have installed a number of little machines run by small electric motors. Then this trade requires a certain precision, which forces the men to acquire dexterity. Thus four men with the left hand amputated, who feared that they would not be capable of doing this kind of work, have been very successful at it.

*The section of wood-carving* has only two pupils. One was a sculptor's apprentice before the war, so he had only to readapt himself to his old trade; but this was necessary, for the poor fellow has three fingers of his left hand completely paralyzed. The other pupil was a cabinet maker's apprentice, and has one foot seriously injured. Both are making comparatively rapid progress.

*The shop for making sabots* has now three pupils: a former miner, a farmer, and a fac-

tory hand. All of them have leg wounds, but their injuries do not prevent their standing up while working. One of them finished his apprenticeship in six months. He is such a good workman that he can make sabots to measure.

*The section of polishers* is, in a way, connected with the woodworkers. This section has twenty-four pupils, most of whom have lost an arm or have a helpless arm or hand. After the war they will find positions in piano or automobile factories or with cabinet makers. This apprenticeship is short and comparatively easy. The secret of this trade lies in the art of mixing the ingredients of the polishes.

The trade of polisher is in the same class with *pyrography and leather or metal repoussé work,* for at a pinch these small trades can be practiced with only one hand. Therefore we advise the men learning polishing to learn also these two specialties, which may at some future time be worth a little extra money to them.

However, five men who show special inclination for pyrography and connected arts are learning these exclusively.

### *B. Metal Work.*

Our fitter's shop (forty-five apprentices), supplied with all the latest improvements, turning lathes of different models, filing vises, drills, etc., has been very popular from the beginning;

former diamond-cutters rub elbows with former molders, confectioners, plasterers, hod-carriers, fitters, mechanics, chauffeurs, founders, blacksmiths, glass makers, and weavers. They usually have some one of the following injuries: contraction or partial paralysis of one hand, lesion of the cubital nerve, ankylosis of an elbow, radial paralysis, a disabled leg, or a club-foot.

Up to the present time more than forty of our pupils have finished their apprenticeship and have been placed outside the school in positions where they earn from five to eight francs a day ($1.00 to $1.60).

One man, formerly an apprentice in a rolling-mill, who has ankylosis of one leg, has entered the blacksmith's shop and is making rapid progress.

There is one kind of metal work which is perfectly suitable for men who have lost a leg, or even for some men suffering with partial paralysis of one hand; that is iron welding. For this apprenticeship we choose preferably former iron workers who are intelligent enough to learn the elements of physics and chemistry necessary for a thorough understanding of this trade. Good welders are in great demand and earn high wages.

More than fifty of our pupils are learning to be chauffeurs or mechanicians for motor

cars. The Belgian central arsenal at Havre supplies us with old cars to repair, which are then used for the classes in driving and care of the car. The pupils also learn to drive the heavy motor trucks which are used for the transport service of the school. Among these pupils are former fitters, factory hands, machinists, weavers, shop-keepers, blacksmiths, house servants, farmers, boatmen, cooks, and navvies. Their injuries are deformation or contraction of the left hand, ankylosis or semi-ankylosis of the left elbow or shoulder, one leg paralyzed, or clubfoot. Fifteen men have passed successfully the theoretic and practical examination for chauffeur-mechanician, held by a delegate from the reserve auto-park of the Belgian army, and several of them are now on active service near the front. A second contingent will soon be ready to pass a similar examination.

*The section of plumbers and zinc workers* has four pupils, who also come from various trades. They are learning to work in zinc, tin-plate, copper, and lead, with the numerous kinds of welding which may be required. They make all sorts of kitchen utensils and are taught the art of utilizing the scraps to make various little articles. They are working hard over the installation of running water in the school, and helped to put in the baths.

*The section of clock-making* has just been organized, and promptly found many customers among the pupils at the institute, whose watches, as one may imagine, have received many knocks during the campaign. Four apprentices, a former diamond-cutter, two fitters, and a molder, are making very rapid progress in this section.

*The section of electricians* is developing from day to day. It now has sixteen pupils, among whom are former plasterers, carpenters, and miners. As a rule, since electricians must install wires and constantly climb ladders, the men who desire to learn this trade should be fairly active. Moreover, as the technology of electricity is somewhat complicated, only those men who have a certain amount of education are admitted to this class.

They generally have one of the following injuries: akinesia of one hand, a disabled forearm, ankylosis of an elbow or shoulder. One man, whose left shoulder is dislocated and who before the war was an electrical worker, has begun to study the theory of electricity and hopes to get a position as overseer or foreman of a shop.

A group of pupils, directed by only one instructor, installed electricity in Bon-Secours (the new Belgian hospital with 1200 beds), and has also done electric wiring in several

other less important hospitals. Private industrial concerns give us dynamos and motors to repair, so that our men get practical experience in that kind of work. One of our pupils recently got a job with a business concern where he earns 7.50 francs a day.

### *C. Leather Work.*

*The shoemaking section* is by far the largest. It has 114 apprentices. There are two divisions, a shop for making shoes, and a shop for repairing them.

Many different trades are represented by these pupils, and their injuries are usually leg wounds. There are a great many men with one leg amputated and one man has lost both his legs. For the first two or three months the apprentices make repairs only; every tiny scrap of leather is utilized, and an apprentice sometimes turns out good work after only a week's practice.

Some of the men, especially those who wish to settle in cities, are specializing on repairs and learning all the details of cobbling. Most of them, however, wish to enter the shoemaking shop, where they learn how to take measures and then to cut all the pieces necessary to make boots or shoes.

Here, especially, the progress made is remarkable. Men who knew nothing about this

new trade have learned in five months and a half to make and finish beautifully a pair of military boots.

One of the foremen has invented a special apparatus for men who have lost a leg. It is a chair to which are clamped rods surmounted by a device which holds the shoe in any position that the work requires. One of the specialties of this shop is the making of orthopedic shoes for the pupils of our school. The instructors and pupils themselves took the initiative. They planned to give a special shoe to one of their unfortunate comrades; a molder made a cast of the crippled foot, the last-maker of the shop made a last from the cast, and the shoemaker then made the shoe. As proud as Punch of this achievement they showed it to the directors of the school, who congratulated them warmly and hastened to profit by this experiment. At present every man with a crippled foot needing an orthopedic shoe has his own last on the shelves of the shop, and when he leaves the school this last will be given to him for future use.

*Saddle and harness making* has been chosen by about thirty apprentices, among whom there are a good many farmers and field hands; injuries of the lower limbs are the rule among them, but there are also cases of ankylosis of an elbow or shoulder, or a disabled hand. The

special apparatus used in the shoe shop for men with one or both legs amputated has been altered and adapted for this trade. After six months apprenticeship, a man can earn his living. We have proved this by placing several of our pupils at a wage of five francs ($1.00) a day and their board and lodging. The average period of apprenticeship is about seven months.

We teach all our harness makers to make fly-nets for horses. The instructors are two fishermen from Blankenberghe. This minor trade is easily learned, and the profits from it are not to be despised.

### *D. Garment-making.*

*The tailoring section* attracts men with injuries to the lower limbs. Moreover as sewing requires only a slight muscular effort, many men who have serious injuries to their arms also choose this trade. It is only necessary to have the use of the thumb and index finger to hold the material, so one sees pupils suffering from ankylosis of an elbow or partial ankylosis of one hand in this section.

The men who have lost a leg use sewing machines run by a small electric motor. Many of the pupils are learning to cut out military and civilian clothing.

This trade is learned more quickly than we

thought possible, in the beginning. After six months apprenticeship a dozen men succeeded in finishing completely and without help a coat and trousers. Three of them received a cutter's diploma from an official jury.

*The section of furriers* has fewer pupils. It is difficult to obtain the necessary raw material, and besides, this trade requires a special knack. Before the war it had become in Brussels and Paris almost a monopoly of German and Austrian workmen. The five apprentices include a miner, a farmer, and two carpenters. One of the carpenters has extraordinary dexterity, which will soon make a real artist of him. The injuries of these men are about the same as those found among the tailor-apprentices. A tanner is attached to this section and teaches the pupils to dress rabbit pelts, for the pelts of domestic rabbits are more and more used in the fur trade. Rabbits raised at the school supply the skins. At present the number is limited, but by the end of winter our breeders can furnish us a much larger number of adult males.

### *E. Upholstery.*

This section is not yet developed. The few apprentices in it are now repairing the mattresses belonging to the school. Before long they will have different styles of furniture to stuff and cover.

### *F. Wicker-work.*

This section has forty-six apprentices. We teach them to make both the large wicker crates and small fancy baskets, as well as rattan furniture. The agricultural and horticultural sections use these crates, so all the horticultural pupils work in this shop, especially on rainy days.

The pupils who expect to earn their living by basket making come often from very different trades, such as street-paving, hod-carrying, etc. Many of them suffer from injuries to the lower limbs. Certain functional disabilities of the hand are greatly improved by this work.

The average length of this apprenticeship is six to seven months.

### *G. Book Crafts.*

*The printing shop* has twenty-one pupils; former fitters, electricians, postmen, clerks, quarrymen, gilders, and even an acrobat. Their injuries are paralysis of one hand or ankylosis of an elbow or knee. Setting type by hand requires a much longer apprenticeship than linotyping or setting type by machine.* This trade, however, requires a certain amount of education, particularly a perfect knowledge of

* The large Linotype Company of London has lent us gratis two splendid machines of the latest model.

grammar and spelling. Special instruction in these two branches is given in the shop itself; and our pupils become familiar with all the niceties of diction and syntax.

At first sight a visitor to our printing office would see no difference between it and a regular printing house which turns out circulars, papers, and books. For our apprentices work at their cases as if they were earning wages. But ask them what was their trade before the war, ask the foreman to show you some of their work, methodically arranged from the clumsy attempts of the beginner to the work of the skilled workman, and you will no longer be astonished that in eleven months inexperienced apprentices have been made into skilled printers, capable of the most difficult and varied work. At present two pupils are only waiting for their discharge from the army to take positions in a printing office. The progress made is largely due to the foreman and careful graduation of the work in exact proportion to the degree of the pupil's progress.

As for the linotype pupils, we hope to prove by a practical examination, which will be given by specialists not connected with the school, that after an apprenticeship of less than a year six of them who had only a rudimentary general education are now capable of working as linotypists in a large printing house. They

are able not only to read manuscript at sight and compose correctly, but they also thoroughly understand the mechanism of their machine and can set it up and take it down just like mechanics. The foreman and his helper deserve the credit for this rapid and complete apprenticeship, as they have spared neither time nor pains.

*The shop of engraving and lithography* has only seven pupils, because this trade requires a special knack. Among the pupils are a former bookbinder, a quarryman, a gardener, a diamond-cutter, and a fireman. Their injuries may be classified as follows: paralysis of one hand, partial paralysis of one foot, synosteosis of both bones of the left forearm. The apprentices begin by learning calligraphy and pen drawing, and, curiously enough, often men who have the awkward handwriting of a laborer make really elegant characters when they practice penmanship. When they thoroughly understand this branch they begin stone engraving. This trade takes great patience, for precision is essential, but talented pupils make rapid progress. One of the men after eight months hard work is already a very good engraver.

*The book-bindery* employs seven pupils almost all of whom have one hand severely injured. We tried to teach this trade to men

with one hand amputated, but they all became discouraged and preferred to try the section of polishing and imitating wood and marble. These apprentices include former molders, tracers, domestics, and lightermen.

For ordinary binding the apprenticeship is only about four months. Of course it takes much longer to learn fine and artistic binding and gilding, which is included in our course.

This shop runs very smoothly. Recently when the foreman was ill, the pupils went on with the work assigned to them in spite of his absence and did as much as if their teacher had been there to oversee and encourage them.

Photogravure offers a good opening for workers with a disabled hand, and even for those who have lost one hand, because only one hand is needed for a large part of the work. Among the pupils in this section are a photographer, a chair maker, and two common laborers. Unfortunately orders are lacking, so that this section cannot expand as we would like to have it.

### *H. Photography and Cinematograph.*

*The photographic studio,* recently established, has eight pupils, two of whom were factory hands, and one a pastry cook who has a disabled hand. The pupils learn first the different processes of printing and preparing the

plates, also focusing. Later they study retouching.

We are considering the possibility of combining this trade with that of the imitation of wood or marble and sign painting. The war has made the use of photography common for all sorts of official documents, such as passports, identity cards, etc., so every large village should have its photographer. But a man could not earn his living by this trade alone. It is therefore very important to combine this occupation with some other connected with it.

The profession of *cinematograph operator* has attracted five men; clerks, navvies, and day-laborers. They are suffering from contraction of one leg, a deformed hand, or ankylosis of one elbow. Their apprenticeship lasts five weeks to two months. Naturally, it requires a longer time to learn to make films, for an experienced eye and constant practice are required. We do not encourage our pupils to go into this profession, for the suitable positions are necessarily few.

### *I. Wig-making and Barbering.*

The twelve pupils of this section are divided into two groups, former hair dressers or barbers, who are now learning wig-making, and apprentices, who wish to become barbers. They are recruited from all the different un-

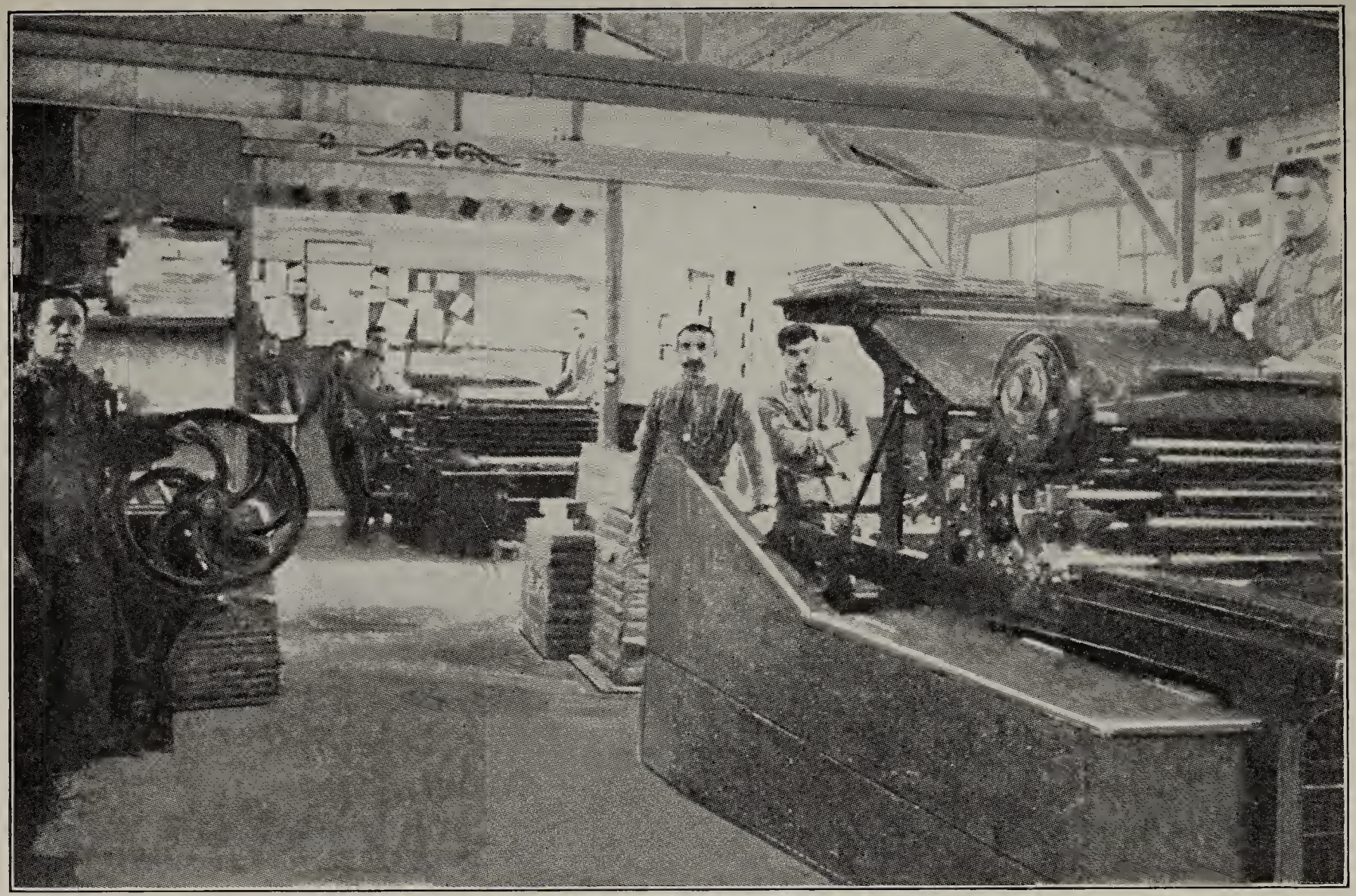
skilled occupations. Their injuries include ankylosis of the elbow, amputated fingers, and even an amputated leg, for it is a mistake to think that a one-legged man is incapacitated for an occupation which requires him to stand. The apprenticeship is comparatively easy. One pupil, a clever one to be sure, has already after five months of practice obtained a position outside the school, where he gets 75 francs (about $15) a month, besides his board and lodging.

### *J. Brush-making.*

This trade should be reserved for the blind. Therefore we do not encourage the other pupils to learn it. However we have a workshop to make brush-backs, as this part of brush-making is less suitable for men who have lost their eyesight.

### *K. Construction Drawing.*

This section deserves special mention, as it has a great many pupils (fifty-four) and very interesting ones. Most of them come from the building trades. They were formerly carpenters, locksmiths, slate-workers, masons, or stonecutters, whose injuries have made it impossible for them to carry on their trade, as they can no longer handle their former heavy tools. But they still have the courage to wish to learn the use of a footrule, a compass, and a



IN THE PRINTSHOP: THE PRESSES

brush, in order to earn their living later as overseers or foremen, as architects' clerks, or even as architects.

The fact that these men formerly belonged to building trades enables them to grasp quickly and easily the details of this work, and facilitates their apprenticeship. The president of the French Union of Architects, who did us the honor of visiting our institution, was amazed at the rapid progress these pupils had made. He kindly sent our men a beautiful collection of works on architecture.

In this section we have had four remarkable cases of re-education of the right hand. Almost all these pupils have lost one hand, or have ankylosis of one elbow or shoulder.

We divide the men of this section into four groups: the least intelligent study drawing exclusively, and prepare themselves to become tracers of drawings.

Cabinet makers and smiths who have talent for drawing, and also a creative sense, take a course of applied art and architecture and will make excellent designers of furniture.

A former smith, who was a skillful workman, but no longer has the muscular force to continue his trade, now draws really beautiful designs for iron gates, railings, balustrades, etc., and a former cabinet maker's apprentice with a paralyzed left hand is studying antique

and modern furniture, and is successful in designing furniture.

A third group takes up serious studies, such as elementary mathematics, topography, and levelling, the elements of physics and mechanics, the study of building materials, their resistance and stability, building laws and sanitary regulations; in short whatever is necessary to make a good superintendent or foreman of construction. These studies cover two periods of six months each. The progress made by these pupils and their unflagging zeal permit us to hope that all, or almost all, of them will attain their goal.

The fourth group is preparing to take the examination for superintendent of construction in the Department of Public Works.

Besides geometry and surveying these pupils make a special study of specifications of public works, materials used for construction, grading and embankment, and they do graphic work connected with their new vocation.

The apparent difficulty of these various studies is considerably lessened by the fact that the pupils have their teachers with them all day, not only explaining the lessons, but ascertaining whether they have been understood and assimilated, giving supplementary explanations when necessary, encouraging those who need it, and, in short, continually influencing their charges in a beneficial manner.

### *L. Industrial Designing.*

For the same reason that builders whose wounds have made them helpless turn to construction drawing, mechanics are attracted by industrial designing. Therefore this section has a number of tracers and fitters, but also some men from very different vocations; telegraphers, students, sculptors, boatmen, even farmers. They form a group of twenty men and have the same functional injuries as their comrades in the section of construction drawing. Their progress is very rapid. They begin with geometrical drawing. After two months' study they are able to make drawings of parts of machines, and after barely four months' instruction they make perfect copies. This section gives most encouraging results. One pupil, who had previously had primary technical instruction, after seven months' study in this section got a job as designer in a factory at 250 francs ($50) a month. Two others have done equally well in less than a year of study.

### *M. Sculpture and Modelling.*

This section has ten pupils, who were formerly plasterers, marble-polishers, or stonecutters. They have ankylosis of the elbow or knee, or a partially disabled hand. As they are learning a trade connected with their former

one, they make rapid progress from the beginning. Lessons in drawing are included in this course.

### *N. Painting.*

This branch has a great many sections, ranging from simple decorative to artistic painting. We have been fortunate in securing very excellent teachers, former reservists or soldiers unfit for active service, who have both talent and devotion to their work.

I mention first the *section of imitation of wood and marble.* It contains twenty-eight pupils, who come from various trades. Most of them have crippled arms, some even have one arm amputated. Their progress is very rapid. After six or eight weeks they produce remarkable panels. With his best panels, which the professor has passed, each pupil makes an album, which will be very useful later, when he is working at his trade. This apprenticeship lasts generally five or six months.

The section of *painting letters, labels, and signs* is connected with this first section. The number of pupils is increasing rapidly. At present there are twenty-one, six of whom have lost an arm. The apprenticeship is comparatively easy, and the wages are good. Most injuries of the arms or legs, which make hard manual labor painful, do not interfere with

working at this trade, which requires only taste, dexterity, and patience.

We have also opened an atelier of *painting on china and pottery,* which has six pupils. The designs for this work are done either by the pupils themselves or by their comrades in the decorative art section.

It is our intention to have all the pupils of these three sections learn all three trades, so that each man will have more than one string to his bow.

Six pupils are learning *decorative art.* They were formerly carpenters, students, even a circus clown (of whom we have already spoken), and a game-keeper. They suffer from lesions of the lower limbs, or a disabled hand. Unexpected talent for this work is often discovered in these apparently rough men, and their very simplicity makes them produce original forms, and color combinations both daring and pleasing.

The professor of glass-painting, a good artist, gives his attractive lessons to pupils who were formerly glass-makers, electricians, or farmers. They are divided into three groups; the actual painters, the cartoonists, and the men who cut and lead the glass.

The least intelligent and talented men are in this last group; however this work must be done with care and precision in order to show the

painting to the best advantage. The cartoonists who were formerly house painters first copy models, then make original cartoons.

Two very talented pupils have exhibited their work at the Musée Galliera, in Paris.

Among the four glass-painters is a former sailor. One of these men after four months' study painted, unaided, a beautiful window with figures, which has been placed in the chapel.

Under the professor's direction, the technical department has set up a small kiln where the painted glass is fired.

### *O. Alimentary Occupations.*

Up to the present time the school has obtained its bread from a French military store at Vernon. Now that our artesian well gives us an abundant water-supply, we have set up a bakery which supplies us with bread and also serves as a workroom for the baking apprentices. We expect to add a pastry shop for both ordinary and fine pastry.

Construction experts estimated that it would take three months to put up a bakery and that the building would cost thirty thousand francs. But our technical department, encouraged by Commissary-General Bôval, who has done so much to improve the school's food without increasing the cost, worked a miracle and in

three weeks and a half built a modern bakery with three masonry ovens of the latest model, two kneading-troughs run by electric motors, a flour store, and a shop where the bread is sold, as the families of the married officers and soldiers are allowed to buy their bread at the school. Captain Haccour and his adjutant, Lieutenant Doutrepont, deserve the greatest credit for the rapidity with which this work was planned and carried out. Praise is also due to the excellent masons who did the practical work. The construction of the ovens and the building which contains them cost not quite seven thousand francs.

The building was begun on October 16, 1916, and on November 10 the first baking was done, and we tasted once more our delicious Belgian bread. On the King's fête-day (November 15), each pupil had his pound of "kramick" (a kind of currant bread which is a Belgian specialty) and the married couples had two.

There are already six apprentices in the bakery, three of whom have lost a leg. This does not seem to interfere with their work, although it requires them to stand.

By the time this book appears we shall have our own butcher shop. Already we do our own slaughtering, which is a great economy. The butcher shop will both supply our needs and teach the apprentices. They will be taught the

art of cutting up the animal properly, which the butcher must understand if he wishes to realize the maximum profit from his sales. But one special object is to use such parts as the heart, lungs, liver, etc., to improve the men's breakfast. The sausage shop, which we have already organized, will do this work. The agricultural department uses the table scraps to fatten pigs, which the pork butcher and his pupils make into sausage meat later.

The Commissary-General has just rented a water-mill, where from now on we will grind the wheat which we buy unthreshed from the farmers around us.

A former farmer has already registered as a pupil. He has already been mentioned as having improved the condition of his right hand, by doing wicker-work.

Thus the School of Trades resembles a great abbey of the Middle Ages, which was self-sufficient and produced all that its inhabitants required.

I have given a brief analysis of the various workrooms and their workers. Poor fellows, all of them handicapped by physical defects, but sustained by redeeming hope! I have given many details, but our school life is made up of small things, which have, however, their significance and cannot fail to interest everyone who is engaged in re-educating the wounded veterans of the war.

## CHAPTER VII

### Apprenticeship

One of the principal reasons for our success at Port-Villez is that our workrooms serve both for apprenticeship and production. As I said in my lecture at La Panne, "those who are engaged in teaching trades to the wounded know that the great stumbling block is to sell the articles made in the schools. In order not to injure local industries, the schools do not take orders, and the directors, afraid to increase expenses, are stingy with raw materials. So the poor apprentice spends several days working over the same piece of iron or steel, moulding, polishing, squaring, and filing it, and in the end he turns out something of no practical value. He is conscious of the futility of his work and naturally becomes discouraged.

"Our school works chiefly for the various departments of the Belgian government. Orders flow in. The technical director and his pedagogic colleague after consultation with the shop superintendents have drawn up programs of practical work to be done by the pupils of the school.

"These programs are based on some simple

principles of instruction: to go from the simple things to the more difficult, not to multiply difficulties in the beginning, to graduate effort, and to sustain interest, for interest insures attention, and attention is the greatest factor in progress in any kind of study.

"An example of interesting work for beginners is the making of 2000 hinges for cash-boxes. Neither extreme precision nor perfect finish is required, but several different processes are necessary; the hinges must be filed and smoothed, and a little fitting must be done. The pupil feels that his work is useful and is encouraged. This psychological factor is much more important in re-education than I at first suspected.

"In the academic section of the workshop the pupils are grouped according to their vocational skill. The beginners are put into a trial squad, so that they may become familiar with their new trade. In order to encourage them they are at once allowed to make something useful. The instructors advise them without actually taking part in the work; they examine carefully the experiments of the new pupils in order to discover their qualifications.

"The foremen, the technical director, and the doctors also watch the beginners closely. It does not take them a week to judge whether a beginner can be definitely admitted to the work-

shop he has chosen, or whether he should be advised to try another trade.

"The experimental work of the first few days therefore has a double purpose; it encourages the pupil to see an immediate result of his labor, and the directors obtain definite information as to the man's ability.

"After several days methodical instruction is begun, following the program of which we have spoken. The doctor plays his part here. He follows the beginners step by step, goes right into the shop, and for hours at a time watches their efforts and their ability, and notes how much fatigue the work causes. He advises, encourages, and helps them, for sometimes the realization of the difficulties to be overcome brings tears to the eyes of the poor soldiers, and if they were let alone, they would in their despair cease their efforts. But the doctor talks to them gently, the technical and pedagogic directors also intervene, and sometimes jokingly, sometimes paternally, they impress the discouraged man with the importance of learning the new trade, so that after the war he may be independent in spite of his crippled condition."*

By introducing order and method in teach-

* Vocational Re-education of Maimed and Crippled Soldiers at the Belgian School of Port-Villez, lecture given by the author at La Panne, January 15, 1916.

ing practical trades we have obtained surprising results, which have convinced us that the period of apprenticeship could be considerably reduced in normal times, if more thought and attention were given it.

When we suggest such or such a trade to new arrivals, they often hesitate, frightened by the supposed length of the apprenticeship. They forget that in peace times the employer only considers his own interest, and demands that his apprentices do work which pays him, instead of training them methodically.

As M. Alleman so well said on the anniversary of the arrival of our first pupils, "by arousing interest from the beginning, by choosing progressive work and avoiding sterile repetition of processes already mastered, by exacting always and in everything the perfect finish which characterizes the good workman, the apprenticeship can be completed in a comparatively short time. A man 42 years old would never have dreamed, when he came to the school, that in seven months he could learn the trade of harness-making. A former quarryman could never have learned to make sabots in six months work in an ordinary shop.

"All our statistics prove how much the period of apprenticeship is shortened by applying the principles of instruction. I have asked the foremen to designate among the crippled men

who are learning new trades those who are now able to earn a normal wage, I refer to their figures, which are, I think, exact. I find one apprentice, who after three months work can already earn two francs a day. Five apprentices after four months study are earning two francs, five 2.50 francs, five 3 francs, six 3.50 francs, and one 4.50; after five months' study two apprentices earn 2 francs a day, five 2.50, six 3 francs, seven 3.50 francs, one 4.50, and two earn 5 francs; after six months' work two earn 2 francs, two 2.50, nine 3 francs, six 3.50, five 4 francs, four 4.50, one earns 5 francs, and two 5.50; after seven months eight earn 3.50, five 4 francs, four 4.50, two 5.50, nine 6 francs; after eight months' work three earn 2.50, two 3 francs, four 3.50, four earn 4 francs, six 5 francs, three 6 francs, two 7.50; after nine months four earn 3.50, three 4 francs, five earn 5 francs, and three 5.50; after ten months three earn 3 francs, two 5 francs, three 5.50; after eleven months three earn 4.50, two 5 francs, three 5.50. These figures are encouraging, as I am sure that the foremen compiled them, at my request, as if in normal times in Belgium they estimated the output of the apprentices in their employ. There is a decided difference, resulting from the choice of a profession and the more or less marked ability of the pupil.

"And we attribute to the confidence which the men feel of their ultimate independence, confidence born of their daily progress, the fact that our crippled men seem happy in spite of their physical injuries and the sadness of their prolonged exile."

I will add that the excellent technical instruction and even the general instruction are great factors in the success of the apprenticeship. We have remarked that the best educated men learn a new trade most easily and rapidly. The greater the theoretical knowledge the more easily is dexterity acquired. In a group of men who arrive at the same time and begin together to learn an absolutely new trade, those who have some education and can therefore understand the theory make far greater progress. We therefore assert, and base our assertion on observation of the facts, that general instruction and theoretical technical instruction certainly accelerate considerably the learning of a trade. Knowledge quite naturally leads to skill.

A good friend of ours, M. Nierstrasz, superintendent of the large creamery of Jules Mélotte at Remicourt (province of Liège), confirms this statement. Referring to his recent experience at our school of munitions at Moisson-lez-Vernon, as well as at the Central Arsenal of motor-lorries at Havre, he said, "The

theory of a trade guarantees rapid progress in the practice of it. One may even say that theory alone without any practice, or with only elementary practice, is a great help when a pupil begins to work at a chosen trade, because as soon as more difficult work is given him, he remembers the theory of it, which helps him to understand and quickly learn to do the work."

I have already spoken of the advantage of combining apprenticeship and production. However, large orders, which would be harmful to the apprenticeship, should not be accepted. For this reason, the interference of persons who do not understand the principles of re-education is not desirable. Orders given by people who are unfamiliar with the organization and sometimes miles away from it risk destroying the results of long and painful efforts. No important order should be accepted without the approval of the directors of the three departments.

Variety in the work is also desirable. Therefore we take private orders, whenever those which the government gives us are not varied enough for the training of the apprentices. And in the present emergency we need not fear that manufacturers will reproach us for competition, because just now most of them have not enough employees to fill their orders.

One peculiarity of the schools of re-education

is the continual influx of pupils, as there is no fixed date for admission.

This difficulty can be overcome, because, except for the technical courses and the classes in general education, the instruction is practically individual. On entering the workshop which he has chosen, the newcomer finds companions who have arrived only a short time before him. Thus a small homogeneous group is formed, and an instructor assigned to it. At regular intervals these groups are re-arranged, according to their qualifications and progress. Every three months a new term begins for technical courses. While waiting for this class to commence, the new arrivals put in extra time in the workshops.

As for the general instruction, the pupils are simply put into the class for which they seem best fitted. As there are several classes in every grade, so that the instruction is given according to the needs and the knowledge of each man, he can profit immediately by this teaching.

One of the interesting things in our system of apprenticeship at Port-Villez is the care that has been taken to develop, I might say to popularize, the use of small electric motors. We have bought about fifteen, varying from one-half horsepower to one and one-half horsepower at absurdly low prices and have distributed them in our workshops.

We try thus to supplement as far as possible the diminished muscular force of our pupils. The use of electricity is becoming more common everywhere. One finds power-houses in all parts of Belgium. Now that the coal deposits of Limbourg are being worked, there will soon be a vast network of electric wires all over the north of our country, and the time is not far distant when every tiny hamlet will have electricity. Then the village carpenter, or wheelwright, the blacksmith, or even the baker, can own little electric motors for their work; and crippled workmen will find these machines always ready to supplement their efforts and supply the force they no longer possess.

## CHAPTER VIII

### Artificial Arms.

The employment of artificial arms is closely connected with the question of apprenticeship. Although great progress has been made toward perfecting artificial legs, artificial arms are still very primitive. The jointed iron rods which are attached to the stump of an arm only replace the bones—the passive part of the arm. The muscles and nerves, which form the active part of the arm, can never be replaced by springs or rubber bands.

When some time ago I read of an inventor who had presented the academy of medicine with a jointed arm, by means of which a man whose arm had been amputated above the elbow could take a box of matches from his pocket and light a cigarette, I involuntarily thought of a pedlar who offers for sale marvellous instruments, which he claims may be used for a dozen different operations, each more astonishing than the other. But somehow when the silly purchasers try to imitate him, they cannot make the instrument work.

Because one man may have succeeded in using an artificial arm, it does not follow that

every man who has lost an arm, if given this apparatus, will be able to employ it for any trade he may wish to practice. The truth is quite different. These perfected arms are not only very costly, but too delicate and intricate to use working in a shop. Moreover very few men are dexterous enough to manipulate these arms properly.

However, one should not condemn all artificial arms, for sometimes they are of great service to skilful workmen who ardently wish to continue their former trade.

Here comes in the factor of "will," and the will, properly directed, can accomplish miracles. Moreover the workman who is a specialist may be able to make some improvements in the apparatus, and adjust it to his special requirements. But the workman who has an artificial arm thrust upon him, or is coaxed into using it by the doctors, although he himself has no faith in it, will never be worth one-fourth of a normal workman.

In most cases it would be much better to re-educate the man as he is, with the limbs that he still possesses, and to choose a profession adapted to his physical limitations.

Our rule for men who have lost an arm, especially if amputated at the shoulder, is to put them in our Auxiliary School, if they have enough intelligence and education. In

this section they are specially trained for civil service or business clerks. A one-armed man may be an excellent clerk and do as much work as a normal man; the great thing is to prepare him carefully for his new career.

An artificial arm may be very useful in certain trades which require only uniform movements; for example, sharpening saws in a big sawmill or carpenter's shop. For filing, also, an artificial arm is useful, because this is a simple process. The fitter must fix the parts in his vise, fit them together, and bore holes with his drill.

Moreover the arm must not be too heavy or clumsy, as it will fatigue the man using it. But if they are made light they lose part of their resistance, deteriorate rapidly, and thus throw the workman out of work. As long as he is at the school, the arm can be promptly repaired, but it will not be the same when he is working for an employer or at home. Then it will mean enforced idleness for hours, perhaps for days.

I have already at Port-Villez verified many times the fears I am expressing. But that should not deter doctors and technicians from trying to perfect artificial arms. What we condemn is the systematic use of these arms. There is no such thing as "the armless man"; there are various armless individuals. Each

maimed man should be studied individually, to see if it is possible to make him a special apparatus which will help him in the trade he has chosen.

For a man who has lost only the hand and part of the forearm an apparatus like a pincers or a hook, by which he can hold his work, may be very useful.

Here are some facts which we have observed among our pupils. In the fitting section where there are six men with one arm amputated, those who have lost the left arm have managed to trace, engrave, bore, file and fit. The men who have lost their right arm have not yet been able to trace with their left hand; but they engrave, bore, file, and assemble the parts.

A former fitter after four months' apprenticeship is capable of an output of 75 per cent of normal, and this output will undoubtedly be increased. Others, who have had two to four months of apprenticeship, attain an output of 50 to 60 per cent.*

The arm we use does not give complete satisfaction. The apparatus deteriorates sometimes, generally during engraving, and the spring of the elbow, which works on a little rack, breaks very easily.

M. Verbruggen, our instructor in the fitters'

* These men were all iron workers before the war, or showed a strong bent for learning this trade.

shop, observing that the artificial arms used by the pupils got out of order on account of the screws, invented, with the help of the shop foreman, an apparatus without screws, but which changes position or grip rapidly and easily. This invention will soon be given to the scientific world, where doubtless it will be received with interest.

I have called attention to this invention in order to show that apparatus of this kind should be made or perfected in the shop where it is used. In the laboratories the working conditions are abnormal, consequently the experiments made there often prove unpractical.

All this proves, besides, that the initiative of even the most humble auxiliaries may produce very good results, provided it is stimulated by an intelligent oversight.

In the horticultural section only one apprentice has an artificial arm. He loads manure on a wheelbarrow and wheels it away. His output is 75 per cent of normal, and the apparatus seems to give satisfaction.

But I agree with Captain Haccour, and Drs. Lejeune and Nyns, that "the question of tools in the vocational schools for cripples should receive special attention from the directors, and particularly the technicians should try by every means to supplement the disability resulting from the partial or complete loss

of a limb by a mechanical apparatus suited to the kind of injury. The output of cripples working with prosthetic apparatus, or artificial arms, no matter how perfect, is inferior to that of the normal workman.

"Therefore the crippled men, after having learned to use their apparatus for work, should learn to use machinery to help themselves out. A more judicious use of machinery and motors, by greatly reducing the muscular effort, would give most of the cripples a normal output of work.

"Man, as we have said before, is more than a human motor; he has intelligence and free will. Mechanical motors should be the docile servants of intelligence."

Our technical and medical men are constantly trying to perfect the existing apparatus, and also make orthopedic appliances which correct faulty attitudes and assist certain movements.

Superficial observers and amateurs say that these things should be made in a prosthetic workshop. But these gentlemen forget that the orthopedic appliances must be modified as the injured limb they help improves, that their form varies with each patient, and very often depends upon the work which the crippled men wish to do. Very often the pupil himself, with the help of his foreman, can make combina-

tions or improvements. These appliances have an individuality which depends upon the individuality of the men in the workshops. Therefore they should be planned, made, modified, and perfected in the workshop; their manufacture should not be restricted to the prosthetic work-rooms.

Let us suppose for a moment that this ridiculous idea prevailed; all the pupils, being given the same apparatus, would have to quit their apprenticeship after a certain period of time, longer or shorter, which would be disastrous, for in this matter to stop is to go back. This idea is entirely contrary to our system, based upon intensive vocational re-education in the interest of the pupils themselves.

Therefore although we do not wish to compete with the special workshops we make the necessary apparatus ourselves. On August 18, 1916, the shoe-making shops had turned out 172 special orthopedic shoes; the fitters' shop, collaborating with the shoe-making or harness department, had furnished four appliances to support the hand, four to support the arm, fourteen "Bourras" appliances, nine appliances to support the knee, four to support the foot, one wire apparatus to support the hand, and one artificial arm; the harness shop had furnished thirty different appliances, such as gloves, wristlets, braces, etc.; finally, the spe-

cial orthopedic work-room, which has been operating since July 5, 1916, had produced, by August 18, twenty-five appliances.

I think that our school is on the right path, and is solving the problem of artificial arms and orthopedic appliances.

What we condemn is that these arms should be forced on the men to experiment with them, or show a "beautiful case" to a colleague.

The future of the men is the important thing. We must give them the means of earning an honest living, supporting their families, and founding a home. Let us employ applied science, not scientific acrobatics.

A word in conclusion, about the prosthetic appliances: Among the men with perfected artificial legs 48 per cent manage very well; 18 per cent manage fairly well, and 34 per cent dislike it and do not use it. Of the others who have had a leg amputated, 34 per cent manage very well with a peg leg; 26 per cent manage fairly well; 6 per cent dislike it, and 34 per cent do not possess one.

# CHAPTER IX

## Agricultural Re-education at Port-Villez.

Faithful to the principle that farmers should stick to the land, on beginning our school we established at Port-Villez an agricultural center for re-education, where we assembled all the crippled men from rural districts who were no longer able to do heavy field work. Those who express the wish enter the shops where trades are taught which can be practiced in the country.

The others learn breeding, dairying, horticulture, floriculture, market-gardening, poultry-raising, and many minor occupations connected with these specialties.

We have plenty of land. Last year we were offered a fine farm of about 350 acres on the sole condition that we keep it in order and restore it to its owner within a year after the end of the war. We were, however, obliged to decline this offer, as the farm was too large. So we simply cleared some ground, about two and three-quarters acres, near the barracks, and made it into gardens. Besides this, we rented from private owners several large fields near

the institute. And Captain Haccour has rented for his residence a pretty little farm two kilometers (one mile and one-fourth) distant from the school: he pays the rent, and gives us the use of sixty acres of pastures and fields. When the number of pupils increased we rented a second farm, called "Farm of Boinville Pond," with about fifty-five acres of ground. So we now have under cultivation about 250 acres.

The agricultural center of Port-Villez is therefore composed of: first, the little farm of Arconville, second, the farm of Boinville Pond, third, the garden and ground rented near the Institute, fourth, the section of poultry and rabbit raising, a really model school, which would bear comparison with the best permanent schools.

The farm of Arconville is situated in a valley, through which runs a boisterous little brook, which would be admirably adapted for fish-culture, and is now used to water our market-garden. A flock of ducks and geese swim there.

The farm-house is surrounded with the usual out-buildings: stables for the cattle, and horses, pig-stye, barns, store-rooms, etc. The cellars of the house have been turned into a dairy at a very small cost. And M. Jules Mélotte, the Belgian capitalist and philanthropist, has given us a modern creamery, from his large factory at Remincourt.

Thirty acres of ground on the slope of two hillocks has been turned into a vegetable garden, and planted with such vegetables as red and green cabbage, celery, leeks, onions, lettuce, potatoes, peas, beans, carrots, melons, tomatoes, artichokes, and chicory.

The permanent staff of the farm consists of a sergeant and six soldiers, all unfit for active service but still able to do some work. They have all done agricultural work before the war, and the sergeant, a graduate of a good agricultural school, was formerly a market-gardener near Charleroi. These men do all the heavy work, which the crippled pupils are unable to manage, and also act as instructors. They understand the importance of their task and are devoted to their pupils. They run the farm as if it were their own, rising early, planning out the work, and economizing as if they were handling their own money. So the books of the farm show fine results. We keep account of all the factors concerned in production: the work of the instructors, and of the crippled pupils and draught horses, the purchase of fodder and fertilizers, and the sale of farm products, milk, eggs, etc.

The poultry-yard has not been forgotten. It is a simple farm poultry-yard, and the hatching is done in a natural way, but all the rules of animal hygiene are observed. Thatched coops

have been made by the pupils and are sheltered from the weather.

Natural meadows, watered by the little stream already mentioned, furnish pasturage for the cattle and for a flock of geese, which is increasing daily.

The farm of Boinville Pond will be used especially for breeding purposes and big crops. About seven acres of enclosed fields will be planted in lucern, oats and potatoes for consumption in our school.

The farm is in charge of a soldier in the reserves, who formerly worked a large farm in Belgium. His wife and children, who were refugees in France, have joined him, and the family lives in the farm-house. Some pupils also live there in order to get practical training in the care of animals, and lessons in scientific stock-breeding. If possible, we will buy a flock of sheep, and train shepherds. The large farmyard will be used for fowls and rabbits. We expect to specialize on the breed of fowls known as "Coucous of Malines," as we have Houdans at the other farm.

The school gardens have been made out of nothing. In July, 1915, the ground was still covered by a flourishing plantation of oak trees. In March we brought there several truck-loads of earth and planted the garden. Three months later the garden was yielding plentifully.

The ground nearest the barracks has been made into an ornamental garden; on one side a typical English garden, on the other a little French garden.*

These gardens are bordered along the road which runs in front of the barracks by a shrubbery of all kinds of ornamental bushes, which gives an admirable collection for instruction.

The middle of the gardens is given up to fruit culture. Espaliers of different sorts run along the walks. We have also a nursery, a rose garden with many varieties of roses, a market-garden, and teach floriculture, as it is done in the suburbs of large cities, cultivation under glass bells and in hotbeds, rotating flowers and vegetables according to the season, so that the earth is always filled and, by means of suitable fertilizers, is made to work continually.

Finally on the side next to the public road we have a typical country laborer's garden, a typical city workman's garden, and a garden suitable for a shop-keeper or clerk.

All these gardens are used for methodical instruction and also furnish us ground for experiments, the results of which will be very

* On July 21, 1916, our pupils placed there busts of King Albert and Queen Elizabeth, and a statue representing Belgium. They were all made in our studio; designed by the teachers, and executed with the assistance of the pupils.

useful to us after the war when we hope to establish in our primary schools preparatory agricultural and technical instruction for boys from twelve to fourteen years old.

Our poultry yard fills a large square space behind the stables; for our community of 1500 to 1600 men employs a great many horses, which are sent to us from the front quite knocked up. Our grooms look after them and put them in good condition again.

Our arrangements are not luxurious. At first a little wooden house, built of materials left from the construction of the huts, sheltered seventeen incubators. Double partitions helped to maintain an even heat. But one night the explosion of a lamp reduced our hopes to ashes, and destroyed sixteen incubators and 1600 eggs just ready to hatch.

Next morning, when Captain Haccour telephoned me about the disaster and I asked if he had taken any steps towards rebuilding with better materials, he replied that the construction shop was already working on the plans and that he had borrowed nine incubators and installed them temporarily in another building.

The new building with space for twenty incubators is just finished, and a large chicken yard begun. Later we will have a building for agricultural classes.

As far as possible the pupils themselves do the work of construction. They plant the posts to support the lattice-work enclosing the chicken yards, make the straw screens and coops, the thatched sheds where the food is prepared, the brooders for the chicks and ducklings, and the drinking-fountains, which are made out of a bottle turned upside down in a metal pan. Thus they will know how to make inexpensive arrangements later in their own homes. In ordinary schools the arrangements are often on too luxurious a scale, so that the man with small means gets very little practical experience from his schooling, for he cannot afford the expensive arrangements used in the school. By building with cheap materials alterations can be made at small expense, or the whole thing can be renewed each year with new pupils.

It is interesting and touching to see these poor one-armed men dig, plant posts, or build sheds, with the help of a comrade in misfortune, sometimes both of them bursting with laughter over the awkward efforts of a beginner.

There are now ninety pupils in this section of poultry-raising, market-gardening, and horticulture, almost all of them former agricultural laborers or farmers.

Among them there are nine who have lost an arm, one without a leg, four who are lame, one with a serious abdominal injury, one with his

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skull trepanned, and twenty with stiff joints or paralysis of one arm.

The pupils are divided into three groups, which follow each other week by week in the following courses:

### *A. Poultry-raising.*

In this subdivision the men form four squads. The first has charge of the incubators and eggs; the second prepares the food and distributes it; the third cleans the roosts and coops; the fourth takes care of the rabbits.

Since this school of poultry raising has been opened, 2,320 eggs of all kinds have been placed in incubation. Of this number 2,135 have hatched out. The varieties were as follows: chickens 1,771, ducks 135, turkeys 93, geese 13, and guinea-fowl 123.

The school also has now about 500 selected rabbits, 40 of which are females, whose fur can be used in the fur trade. Later when we kill some of the full-grown rabbits, the pupils will be taught how to prepare the skins by a tanner who belongs to the furriers' section.

This section has been extraordinarily successful. The Minister of War gave us 3,000 francs to start with, and this sum has covered our expenditures for incubators, eggs, and food up to the present. Old crusts of bread and bones from the kitchen, blood from the slaugh-

ter-house, and grass cut from the lawns provide a large part of the food for the poultry.

A Flemish teacher, M. de Cooman, a popular lecturer on farming topics, who in normal times made a good income by poultry-raising, has taken charge of the instruction and superintendence of this section. He applies himself to his task with a devotion worthy of the highest praise. His pupils love him like a father, Only three hours a week are given up to theoretical instruction, the rest of the time is employed in practical work, but the whole day is really one continuous lesson.

Thanks to the initiative of Captain Haccour a certain number of selected hens of various French and Belgian breeds have been put in a special yard. We hope by crossing these breeds to obtain more vigorous stock. For example, we are experimenting with a cross between the "coucou" of Malines and the Flemish gamecock, a particularly robust fowl.

### *B. Horticulture, Floriculture.*

Every morning at half-past six the men in the second group assemble in the garden, where for two hours the teacher gives them both theoretical and practical instruction. The lesson begins with a rapid inspection of the garden in order to decide just what work must be done today. The teacher calls the attention of his

pupils to certain peculiarities of vegetation, to accidents caused by the weather, in short the pupils learn "to read the open book of nature." In a short time they acquire a faculty of observation, quite unusual except as the result of long experience and many mistakes.

From nine to six, with a rest of an hour and a half at noon and half an hour off at four, the pupils are busy with the work which the season requires. However for an hour in the morning and another in the afternoon they receive instruction in both national languages and in arithmetic.

### *C. Market-gardening.*

The third group goes every morning to the school farm of Arconville; in bad weather they go in an omnibus, which brings them back in the evening. They are distributed in the different fields, where they do planting, weeding, thinning, fruit-picking, and all the various kinds of work necessary in market-gardening. They also learn to ship fruit and vegetables in carts or by train; for our farm ships its produce to the hospitals in Havre and Rouen, to Sainte-Adresse, to detachments of artillerymen at Havre, etc. These vegetables are sold at very low prices, which, however, give us some profit. The management is now negotiating with the government about the shipment of one or two carloads a day to our troops at the front.

When bad weather prevents the men in groups B and C from working out of doors, they are put to work on wicker screens and straw mats for the poultry-yard, crates to ship vegetables, eating-troughs for the fowls, coops, etc. The strongest learn to make heavy wicker crates.

The pupils also take a rudimentary course in accounting, sufficient to allow them to estimate the cost price—which is an indispensable factor in the success of any enterprise.

The men like their work, they acquire dexterity in the use of what remains of their limbs, and their morale is excellent. Their physical health improves and they learn to do their work with method, punctuality, and judgment, as they acquire professional knowledge.

After the war when they go home they will not be burdens to their families, poor creatures to be pitied and left to stagnate in idleness and misfortune. On the contrary, they will be proud to show what they can do, and in many cases they will be able to bring unhoped for prosperity to their relatives.

If the Fund for Cripples, founded by the Association for the Work of the Belgian Wounded, which was recognized by the government October 30, 1915, is rich enough after the war, it will assist the most deserving men by buying them an incubator, or giving, or simply

lending them without interest, a small sum of money with which they can buy eggs and some good hens.

Up to date we have not tried cultivation by machinery, but we are considering it. Since we rented the new farm of Boinville Pond, our ideas have taken shape and next spring we shall be ready to begin this new instruction. We shall form a section of agricultural machinery. Last year our men cut our landlord's harvest, and in cutting timber from the woods for the use of the Belgian army our crippled men learned how to run a motor. We hope to systematize these experiments and give some of our disabled men a course in motors and agricultural machinery, so that they can not only run them but will understand their care and repair.

# CHAPTER X

## The School for Training Assistants in Commerce, Trade, and Administration

At the beginning of 1916 M. de Broqueville, Minister of War, decided to found a large school where the maimed who aspired to non-manual careers should receive a thorough education which would prepare them for places in business houses, banks, and private and public administration.

The beautiful white Abbey of Mortain, which at the beginning of the war served as a hospital for the wounded enemy soldiers, was very graciously placed at our disposal by a good friend of the Belgians, M. Justin Godart, Under-secretary of State for the Military Department of Health in France. The classes were opened February 7, 1916, and since then numerous crippled men have pursued their studies in peace, in this splendid Norman landscape through which flows the Cance, with its picturesque water-falls.

M. de Broqueville was touched by the situation of some non-commissioned officers whose hopes of obtaining their shoulder-straps had been shattered forever by an enemy's bullet. It

was impossible to ask these men to learn trades as their previous studies had fitted them rather for government or private offices. There was besides a set of young men of the middle classes, who in normal times filled clerical positions in business and professional offices, and who felt that they were losing caste by putting on a workman's apron. The railroads (operated by the Belgian State) and the post and telegraph employ in peace time an army of one hundred thousand men many of whom are now crippled by the war. It is no more than just that the railroads should, as far as possible, take back their men after the war. In addition there are many men who have lost an arm, who dream of getting a position as doorkeeper for a government building, guardian in a museum, or messenger in some public office. If all these candidates are to get places, the museums will have to be tripled and the government departments multiplied by ten.

The Minister concluded that if the public service, already none too brilliant in its functioning, had to absorb all these poor wrecks, it would not result in the improvement of the service. He therefore deemed it opportune to take advantage of the period of enforced idleness, which the war entails for this category of the maimed, in order to prepare them for future employment. By training a certain number of

them as bookkeepers in banks or trade the demand upon public offices would be lessened, and society at large would profit.

It is these ideas of M. de Broqueville which inspired the organization of the Institute of Mortain.

The establishment responded quickly to the general expectation. The professors were zealous and the pupils animated by a real fever for work. The examinations at the end of the summer term showed the excellence of the instruction and the important progress realized. Everything pointed to a calm and fruitful existence for the institute. But at the end of September it was learned that the school was to be disbanded, and the abbey transformed into a hospital for the sick and wounded. There had been some conflict of interests or misunderstanding in the execution of orders. At any rate it became necessary to collect the pupils in some new abode, and Commissary-General Bôval soon received orders to unite this institution with the school of trades at Port-Villez.

This change was quickly made. M. Bôval showed his usual generosity and cleverness, and the storm passed.

To this transferred Institute of Mortain we have given the name of "School of Assistants in Commerce, Trade, and Administration." We want to show clearly that we do not claim to

train men to be managers of big business, but only modest and devoted assistants, capable of rendering services which will entitle them to wages which, added to their pensions, will enable them to support a family.

The school has a primary section, one for administration, another for bookkeeping and a fourth for training teachers. All, except the section of bookkeeping, include instruction in both languages. Each of the divisions of the primary section, which has 170 pupils, includes a class A, corresponding to the intermediate grade, and a class B, corresponding to the highest grade of our primary schools. Men who only know their alphabet cannot enter the school for clerks. Their lack of instruction proves that they cannot depend on their brains to make a living.

Besides these classes, which are subdivided when the number of pupils requires it, there is a receiving class for pupils who arrive during a term. The men are also taught arithmetic, geometry, elementary ideas of commerce, the history and geography of Belgium, the principal facts of contemporary history, elements of general geography, and social economics. These courses are divided into two terms of six months each. The pupils in this section are mostly ex-railway employees, who are no longer capable of handling a spade, or driving an engine, or

acting as brakemen, or even handling baggage or freight. We prepare them for positions as ticket-collectors, postmen, or freight clerks. The Belgian government has given us some Morse telegraph apparatus, and several pupils in this section are learning to send dispatches.

We are training others for office porters, workers, collecting clerks, and shop-keepers. One-armed men can fill all these positions perfectly well. Here I wish to remind the readers of what I have already said about the desirability of training crippled men who have some education for positions like these, rather than attempt with an artificial limb to re-educate them in a manual trade. In some of these semi-clerical positions a maimed man does quite as well as an uninjured man, whereas his value for manual labor would at best be only one-half that of a normal workman.

This primary section has been ridiculed by some friends of ours who are not well informed. In the beginning, because of a false conception of our aims, the school at Mortain was called "The School of Intellectuals," to distinguish it from the School of Trades at Port-Villez. This name was obviously incorrect; it would have been better named "The School of Non-Manuals." To apply the pompous name of "intellectual" to our modest program of instruction is a palpable absurdity. At the risk of

repeating myself, I reply to these friends that it is much better to teach these soldiers and perfect their education than to abandon them to private charity, or collect them in a camp and later hand them over to the government to take care of.

The administrative section has fifty pupils, and the course of study covers three terms of four months each. There are several subdivisions, but all the pupils take lessons in the principal branches. These are both national languages and a third language, writing, the geography and history of Belgium, general geography and history, commerce, constitutional law, arithmetic, elements of algebra, plane geometry and the formulas of solid geometry, elements of physics and social economics. In the sub-sections we give special courses. Thus we prepare the men to take examinations for government positions such as train conductors, railway, postal, and telegraph clerks, treasury or court clerks.

Thirty-five pupils are taking the commercial course, which is divided into two terms of six months each. The first term the pupils study commercial arithmetic, four languages, and commercial geography. In the second term there are three distinct groups, bookkeepers, correspondents, and wireless operators. All the pupils in the commercial and administrative

sections study stenography and typewriting, for the war has necessitated such a speeding up of work in the government offices that typewriters are used everywhere and knowledge of stenography and typewriting is certain to be required after the war is over.

The studies taught in the first term of the commercial course are developed in the second term, and commercial law is added; the correspondents perfect themselves in stenography and typing, the bookkeepers acquire a thorough knowledge of industrial and commercial bookkeeping, and learn something about banking and exchange. The Flemish pupils make a special study of commercial transactions connected with ports of entry.

The students in the wireless subdivision study physics and electricity, radio-telegraphy, the elements of maritime law and armament, and maritime geography. Three of our pupils are now perfecting their knowledge in a Marconi establishment in London, where they are paid five shillings a day, and they will soon be placed on Belgian or Allied ships as wireless operators.

The commercial section includes a subdivision to train travelling salesmen. The pupils learn correspondence, elementary commercial bookkeeping, and languages; also "selling talk," a course which at first was given by an actor, with enormous success.

The normal section for the training of teachers has also two terms of six months each. The fifteen pupils are mostly former "non-coms," or young men who aspired to active careers requiring a certain amount of physical strength, which have now become impossible for them. This section runs very smoothly, the keenness and good morale of the students is remarkable, and M. Poullet, Minister of Arts and Sciences, has promised to form a committee for us, which will examine the first four pupils whom we have trained.

At Mortain there was a class composed of Belgian refugee children, which gave the normal students an opportunity for practical work. At noon the children were given soup from the non-commissioned officers' mess. At Port-Villez we are considering organizing a similar class. The families of officers, non-coms, and married men would furnish the children. This little practice school will have two class-rooms and a small refectory for the children, who can be taken back and forth each day by omnibus, if necessary.

Our school plant is being completed. With money given by friends we have equipped a physical and chemical laboratory, where the pupils can do practical work.

The school régime is as follows: morning, rise at 6 o'clock; study from 7 to 8; lessons from

8 to 10; gymnastics, study or tests from 10 to 11; lessons from 11 to 12; afternoon, lessons from 1.30 to 3.30; gymnastics, study or tests from 4.30 to 6 o'clock.

Thursday afternoon is given up to private correspondence, reading for recreation, or independent study.

Since this school has been installed at Port-Villez, we have inaugurated a system of individual verbal tests. These take place during study hours, while some of the pupils are working in the gymnasium. The pupils are stimulated by these tests, errors of comprehension are rectified, and the young men learn to express themselves with clearness and method.

Such is our School of Clerks. The teachers have been borrowed from the oldest classes in the stretcher-bearer's corps or the reserves. Several of them have done their duty bravely at the front and have been sent to the rear on account of serious wounds. One has lost an arm. These excellent men, who, in peace time taught in our public or private schools or colleges or were bookkeepers with large business firms or held government positions, devote themselves to teaching their unfortunate comrades with the utmost self-sacrifice. Supplementary explanation is never a burden, and there is a sympathy between master and pupil which opens the hearts and intelligence of the latter and renders their progress very rapid.

# CHAPTER XI

## The University Home of Paris.

In the beginning we organized at Mortain two classes of higher classical courses. Later we gathered in this establishment men who had left the various universities or who had expected to go there. But the few pupils in this class required professors out of all proportion to their small number. So the Minister of War found it more expedient to establish in Paris a University Home which would permit the disabled soldiers to continue their collegiate work, obtaining their board and lodging at the expense of only fifty cents a day to the State.

A house was found in the Avenue de Saint-Mandé, noted for its famous political banquets of recent days and in which was spoken the famous "Discourse of Saint-Mandé." The rooms are spacious and well lighted. A sun-parlor makes an admirable rest-room and a garden with its beautiful trees is a pleasant recreation ground.

At the end of November, 1916, twenty-two disabled soldiers took this opportunity of finishing their education. They attend courses in the University and the upper classes of the

*lycées* of Paris, and M. Brunet the Belgian Deputy, who so excellently directs and administers the home, has obtained free instruction in some instances and at a great reduction in others.

Six students are taking law, two are preparing themselves to be professors, one is registered under the faculty of economics and administration; two are medical students and one is in the scientific department—physics, chemistry, and natural sciences; one, who is planning to be a normal school teacher, is taking philosophy and sciences. Three are in the College of Commerce, four in the Electrical Engineering College, two study applied chemistry, and several are in theological schools. The Minister of Science and Arts furnishes them with free textbooks, drawing and surgical instruments, and after their lecture work the men come together in the study hall and study assiduously. Let us hope they will thus regain in a large measure the time lost in the war and through the facilities placed at their disposal at Paris make their mark in the world.

The University Home completes and crowns the organization of vocational instruction given by the State to the disabled soldiers. M. de Broqueville has from the beginning of the work considered the problem as a whole; he has a broad point of view and desires us to work

WORKMEN WHO HAVE SUFFERED AMPUTATION OF AN ARM

"quickly and well." These are the very words he used when in the spring of 1915 he requested me to establish complete vocational instruction for the disabled. His personal and continual encouragement has assisted us in solving as a whole the problems before us and in surmounting all these obstacles which necessarily must arise.

At present from the humblest illiterate workman who must learn to read and write and needs training in a new trade to those young men who have abandoned their university studies, including all the agricultural laborers, the operatives in industry and in alimentary trades and the clerks in commerce and business, all the sons of Belgium who need vocational re-education on account of the wounds received in the war—absolutely all—find new inspiration and means of livelihood in our schools of theory and practice.

Because re-education is compulsory none of them, none I say, can escape our beneficent action and care.

## CHAPTER XII

### Economics at Port-Villez.

The reader may be interested in learning some of the details of the resources of our institution.

The Belgian government bore all the expense of our installation, including the cost of sinking an artesian well which was about 25,000 francs. The eighty-six portable huts which serve for the dormitories and shops were furnished by the medical corps of the Belgian army and paid for by the government. They will be eventually removed to Belgium where they ought to be very useful in the devastated regions. The permanent constructions in the camp have been erected with materials supplied by the proprietors of the estate. The rubble and gravel for the roads have also been found on the property. Electric lighting is charged to the State. We have been able to supply our fuel for heating the stoves and bake-ovens from the neighboring forest.

The tools and machines have cost between 180,000 and 200,000 francs. The machines are still valuable and will, I believe, even prove a good investment for the State. The enemy has

pillaged our factories so that there will be a dearth of machinery for some time after the war. The tools have been considerably added to by the pupils themselves.

The beds and bedding come from the stores of the medical corps. The Commissary supplies clothing which is taken from stocks of old clothing which has been cleaned and repaired and is now quite decent. The very simple furniture has been made in our own shops with wood bought from carpenters who have been mobilized.

For the maintenance of each man the State allows 1.97 francs a day of which 0.43 centimes is paid directly to the man himself. This is the ordinary pay of a Belgian soldier whether he is at the front or in the rear. On the balance of one franc and fifty-four centimes the men are well and abundantly fed. The various resources of the school add to our facilities for giving the men an excellent and varied diet.

The officers and civilian teachers and military instructors attached to the school are paid by the War Department. In the case of the officers and military instructors certain advancements in rank have been made in order to lend weight to their authority.

The State also covers all expense of transport and supplies us with auto-trucks, gasoline and oil. It pays for the keep of the draft

horses used on the place. These are generally horses sent back foundered from the front but they often recover with the good care they receive at the school.

All the general expenses, such as the electricity for motor-power, the salaries of shop superintendents and instructors, and the wages of the pupils, are paid by the profits made in our shops. The instructors receive from 1.50 to 3 francs a day, and the pupils' wages vary from fifty centimes to one franc a day. The balance of our profits is invested in the Fund for the Disabled, which already amounts to a good round sum, and will be used after the war to set up some of our pupils who will need help.

Our administrative staff, headed by Commandant Bonte, who watches over the welfare of the men with jealous care but takes measures to prevent any wastefulness, practices on a large scale the art of using scraps; at Port-Villez nothing is thrown away, every bit is utilized.

Captain Haccour, for his part, sees to it that scraps from the shops are all used; one of our new bake-ovens is constructed so that it can be heated with the chips and shavings from the carpenter shop. Sawdust mixed with a glutinous substance is made into bricks which will burn. We even use the sawdust of green

poplars, mixed with blood, to feed our chickens.

All our men are interested in economizing, and we hope that they will all acquire habits of order, thrift, and foresight, which will be of permanent value.

Basing my statement upon the statistics already given, I can affirm without boasting that our method of handling disabled soldiers is at the same time the most rational, the most productive, and, relatively, the cheapest.

As it costs no more to maintain a man in a school of re-education than in a convalescent home, is it not better to send the man to the school as early as possible?

On the other hand as long as the crippled men are living in the school they receive no pension, as they have no expenses.

If the expenses of our school are compared with those of charitable institutions subsidized by the government we believe the balance will be in our favor, while the money which we spend has the very great advantage of restoring a man's independence instead of allowing him to remain a permanent charge.

There are also less obvious advantages. The State benefits greatly by the labor in our school. For though the school makes a profit on the orders which it fills for the State, the State benefits by the low prices of the school to the extent of thousands of francs.

We believe that the State should bear a large part of the expense of re-education, and not regard as a charity or benevolence what is a plain duty of the State and a right of the disabled soldier. This does not mean that the State should absorb or supplant private associations. On the contrary, these associations should be directed, encouraged, and subsidized by the State.

# CHAPTER XIII

## The Home for Invalid Soldiers at Sainte-Adresse.

The Home at Sainte-Adresse was founded by private initiative and assisted by public authorities, while the sister school at Port-Villez is maintained exclusively by the Belgian Government. These establishments represent the two principal types of school in favor in Belgium for elementary and vocational teaching.

In the lecture to which I have already referred several times I gave the details of the founding of this home with which the venerated name of M. Schollaert, President of the Chamber of Deputies in Belgium, will always be associated.

After the battle of the Yser the cripples of the Belgian army, barely cured of their wounds and prematurely discharged from the hospitals in the general confusion, came in their distress to M. Schollaert, President of the Belgian Chamber of Representatives. "Touched by their pitiful condition, he requested of the Minister of War the authority to establish a home at Sainte-Adresse where they might receive lodging, board, and medical care. The Home

for Invalids was rapidly filled. M. Schollaert found some premises which he could have rent-free, and quickly arranged them. He had the good fortune to attract to the work Dr. Smets, the noted physician of Schaerbeek, who adds to his medical skill a deep understanding of and sympathy for human nature, and who in this place of pain knows how to unite a gentle kindliness, almost motherly, with a charm that makes of him a doctor of souls as well as of bodies. His jovial manner and good humor bring cheer and happiness to the discouraged men under his care. He organized in a most skillful manner the mechano- electro- hydro- and thermo-therapy, and contributed greatly to the success of the establishment. Meantime, M. Schollaert started the workshops and arranged the vocational courses, attending himself to all the details. It was truly touching to see this veteran statesman participating in the detailed management of the hospital, talking with the men, concerning himself with their needs, and watching their progress with interest."

Later the various departments scattered throughout the town were all brought together in one large camp at the place called "Sous Bretonne." The Belgian Department of Public Works loaned fifty-four portable wooden barracks, which had been prepared with an idea

of reconstructing the devastated region of our country, but now shelter the pupils and workshops. The barracks present a pleasing aspect, surrounding a large central, open square; it resembles a workman's town, improvised by a prodigious organizer.

M. Schollaert, remembering that he had twice been Minister of Education, provided for general instruction for the patients, as well as special bookkeeping and commercial correspondence courses. But soon with the influx of manual laborers he organized the curriculum for re-education and vocational re-adaptation. The initial attempts were modest. In the buildings about the "Manor," which was the mother cell of the whole school, improvised workshops now house the woodworking trades, put in the stable, the turners in the kitchen, the carpenters in a small rented shed, and the shoemakers in the main room of the house with makeshift equipment and instruction given by workmen from Havre who donated their services. But the scope of the work increased tremendously when Count de Renesse, captain of Reserves, took charge of the technical direction. He was not a novice in technical instruction. In those distant days when peace still reigned in our dear little country, he had established near his country home at Campine two flourishing schools where both the girls and

boys of the neighborhood were trained in agricultural occupations.

Under his energetic guidance the workshops really developed and in a short while he created the cantonment mentioned above. The workshops now house the woodworking trades, carpentry, toys, wooden shoes, brush-backs, coopering, wood-turning and wood-moulds, the metal workers, mechanicians, iron turners, electrical draughtsmen, lead and zinc workers, agriculturalists and breeders of small animals, florists, truck-gardeners, breeders of poultry and rabbits, sundry trades, such as bakers, pastry-cooks, upholstery trimmers, plaster-cast moulders, brush-makers, shoemakers, tailors, hatters, box-makers, printers, envelope-makers, etc.

Toy- and brush-making have achieved a high degree of perfection. Captain Renesse is in touch with the large shops of Paris and London and receives from them large and varied orders. This variety is indispensable for good apprenticeship, for it is important for the pupils to have work of as many different designs as possible. The British Government is one of his best clients and orders brushes of all kinds.

The work at Sainte-Adresse, after several tentative plans, has been organized on the same plan as at Port-Villez. This is not surprising—each institution has faced the same

problems and naturally has solved them in about the same manner. It is natural that we should both use the system favored in the Belgian schools, and apply it in the same way.

The school of Sainte-Adresse has, like us, a technical and pedagogic department, which assists the medical. The nominal director of Sainte-Adresse is an army surgeon in active service. In our humble opinion this is an anomaly, but not of much importance, for M. Schollaert, without having the title, is really the executive director-general, coördinating the three departments and directing them towards a common goal.

As at Port-Villez all the pupils must take a course of general instruction, for M. Schollaert shares our conviction that it is essential to complete the education of the men, in order to compensate them in some degree for their disabilities. He has not fallen into the error of a certain martinet, who in his profound wisdom thinks that the pedagogic division of the school at Port-Villez has no reason for its existence.

At the beginning of the work pupils entering the school were put in the general instruction classes. Those who needed it were given appropriate physiotherapy and only after a certain period of such instruction and treatment were they admitted to the workshops. A certain loss of time resulted which was not always com-

pensated by an increase of instruction. Now the school follows the Port-Villez system. The men are immediately put to work at a trade and the practical work alternates with theoretical studies, such as French, chemistry, calculus, design, and technology. Sainte-Adresse has also an accounting and clerking division which resembles in detail that of Port-Villez.

What particularly interests me is the economic aspect of the work which now has 699 students. Since December 10, 1914, according to an agreement with the Minister of War, the school admits all crippled or invalided soldiers sent to it by the medical division of the Belgian Army. The State makes a daily allowance of fifty cents per man to the institution, of which five cents goes to the man himself. The management furnishes clothing, and the medical corps bed and bedding, for each man is assigned a hospital bed and mattress, not the usual camp cot and straw-tick. The army sends a complete corps of instructors, chosen as far as possible from older men ineligible for active military duty, and instructors borrowed in groups from the ranks of the stretcher-bearers.

As long as the pupils belong to the apprentice class, they receive ten to twenty cents a day. From apprentices they develop into semi-skilled workers, and are then remunerated

in accordance with their ability and their trade, some of which is piece-work and paid accordingly. Most of them, however, receive fifty cents a day, that is three dollars a week, or twelve a month. Of this two dollars a month for spending money is given to each man by the management, the rest of the salary, about ten dollars, is placed to his credit in the savings-bank. Thus some men accumulate several hundred dollars. The savings-books are kept by the paying-teller. One man saved 1010 francs, or over two hundred dollars. It goes without saying that the heads of the organization willingly permit the men to draw on their account if the expenditure is for reasonable requirements.

It should be mentioned again that each workman—so far as his trade permits—receives a complete working outfit for which he pays on the installment plan, so that he soon owns his equipment.

To give some idea of the extent of the industrial activity of the Sainte-Adresse School we may repeat that with an invested capital of $6,000, in 1915 it had an income of $55,000.

M. Schollaert, partly by personal donations, partly by subscriptions, raised the funds to buy the varied and complete mechanical equipment. Needless to say the founder of this noble institution surrounds his students with a healthy

environment. Like us, he attaches a paramount importance to the necessity of conserving and raising their moral standards by systematic and continued effort and by frequent proper amusements.

The Home of Sainte-Adresse is a magnificent creation, a monument to its founder, M. Schollaert and his devoted assistants. It was the first Belgian institution of its kind established on the hospitable soil of France, just as M. Schollaert was the pioneer in all such work. Great honor is due him. The 2918 convalescents, invalids and cripples who up to the present have been cared for in this establishment, and their families, are more than grateful to him, and the nation pays tribute to him who has brought happiness, contentment, and prosperity to its injured sons.

# CHAPTER XIV

## The Intellectual and Moral Care of the Pupils.

We endeavor at Port-Villez to maintain among our pupils an excellent morale and a high standard of cheerfulness. It would be a mistake to think that our cripples are morose and that their assemblies resemble a gathering in a clinic. As a matter of fact, we take great care to prevent their becoming discouraged and do not allow them time to be bored. We pursue boredom like a wild beast and banish it by continually organizing suitable amusements for the men.

Our pedagogic department influences the men both by class instruction and private conversations between masters and pupils. Lessons in reading and history afford an opportunity for moral, civic, and patriotic conversations, which maintain confidence while preaching endurance.

We insist that each professor and instructor should take a special interest in a certain group of pupils and look after their moral welfare particularly. Thus they take an active part in the joys and sorrows of the men, deep re-

ciprocal confidence is established between the masters and pupils, and the teachers' influence becomes profound and lasting.

Twice a month the directors of Port-Villez give moving-picture shows, alternating burlesque and serious, tender and grave. The generosity of the General Cinematographic Agency in Paris, which gives us gratuitous use of its films, allows us to have these shows frequently.

Port-Villez has a band of fifty pieces. Most of the instruments were given by Senator Francq, of Belgium, and the band was increased as needed by little subsidies from the charity fund of the Minister of War. Besides the band we have a string orchestra of first class artists, which has just been considerably increased by the musicians belonging to Mortain. Both these organizations contain some professional musicians, discharged from the army on account of bad health.

The school has, in addition, a Flemish and a French choral society and a Flemish and a French dramatic society, which vie with each other in zeal and enthusiasm. Each of these little societies is lucky enough to have as members several professional actors, some of whom are well known in Belgium and abroad. They act as managers and teach the beginners their art.

Thanks to all this talent we can arrange really artistic and interesting programs, which educate the taste of our men. They behave like gentlemen at the performance, and applaud in the proper places without shouts or untimely demonstrations.

Every Sunday all the pupils assemble for a varied entertainment. More and more of them take part in these representations, which are full of ardent patriotism. Military plays, extolling noble sentiments, always have the greatest success, and "poilu" songs are the favorites. These gathering are pleasant, and I like to attend them, for they are real family reunions; the men sit in friendly groups with their teachers and exchange intelligent glances at the interesting passages. If one looks around, one sees the hall filled with attentive faces.

Once a week a group of artists, all of them prize pupils of our conservatories, arrange a concert of classical music, with an introductory talk of ten minutes. At first they had an audience of not more than sixty men. Now there are always several hundred.

Our library already contains more than a thousand volumes. Several of the large French publishing houses have made us generous gifts. Our own press prints the works of some Flemish authors in pamphlets at ten centimes a copy. We have bought a good many technical

works, which are especially appreciated by our foremen. The pupils are also beginning to enjoy them.

In this way we have tried to accustom our men to some intellectual intercourse, and I am happy to state that our expectations have been surpassed. The pupils of Port-Villez will certainly keep the stamp of their stay in the institute.

At the request of the Minister of War and Mme. Vandervelde the British society "Gifts for Belgian Soldiers" has given us an auto-bus, in which the wounded and cripples drive out.

We propose soon to organize a savings-bank for our pupils, similar to the one which under the direction of M. Schollaert has been so successful at the Home at Sainte-Adresse. Until now we have not been able to manage this, because of complicated legal formalities which we should have to go through with in order to affiliate with the French Savings-Bank. On the other hand the Belgian military regulations forbid the quartermaster to receive on deposit sums belonging to the soldiers. The future autonomy of the school will permit us to organize our own savings-bank in the interest of our men; this is a necessary measure, for many of them have already saved important sums, which must be deposited.

A chaplain is attached to the school and cele-

brates mass daily, during the week in a hut arranged as a chapel, on Sunday in the large auditorium, one end of which terminates in a choir decorated by three painted windows, done in our studio. So the men who desire it have every facility for fulfilling their religious duties, just as if they were in their own parish. Everyone respects the religious belief of his comrades, and those who attend mass are never laughed at.

The large auditorium, 270 feet long by 65 wide, is used as refectory, theatre, and chapel. A curtain can be drawn over the choir. A terrace, which serves as a roof for the kitchen and storerooms, runs the length of the hall. The men come here to rest and drink a glass of beer or wine while admiring the beautiful view over the valley of the Seine. They are never weary of contemplating this smiling landscape, whose glistening beauties appeal to the eye, and even the most hardened men respond to its charm.

In pleasant weather the pupils play eagerly the national sports; archery, nine-pins, or bowls, ball games, etc. Sometimes on holidays the directors get up a Flemish kermess, recalling the traditional national gayety, and thanks to the generosity of a Parisian dealer, the fête on July 21, 1916, ended with a grand illumination and display of fireworks.

Some gloomy people have criticized these fêtes and amusements as unsuitable for war-times, amidst so much grief and mourning. Certainly such fêtes would be out of place anywhere except in such an institution as ours; but our poor pupils have done their bit for their country and certainly have earned the right to some healthy amusement which will help them to forget their ills and troubles. If our critics will begin to do their patriotic duty as our cripples have done theirs, they will have the right to criticize later.

We purposely give our men diversions; they are away from their families, most of their wives and children and relatives are in the invaded district. News of them is seldom received. Moreover during their leisure hours there must be times of nervous depression, when the men feel bitterly their crippled condition and are dismayed at the difference between the fine healthy fellows they were before the war, and the poor maimed creatures they are now. They would fall into melancholia, and drown their sorrows in drink, if we did not systematically chase away their black thoughts.

The first requisites of a vocational re-education are a firm will and a good morale. These fêtes revive the courage of the men and are an integral part of our system. Who would dare to blame us for utilizing them for the good of our dear cripples?

There are others who reproach us for decorating our halls and gardens. They forget that the decorating is done by the pupils while learning their vocations. In order to learn how to plant an ornamental garden it is obvious that one must plant one.

These people remind me of Judas Iscariot who reproached Mary Magdalen for having anointed the Savior's feet with precious ointment which she might have sold and given the money to the poor.

## CHAPTER XV

### The Choice of Directors.

In the preceding chapters we have repeatedly insisted on the importance of choosing with care the men to direct the institutions for the cripples. For these institutions have no value apart from their directors and the finest installations and the best curriculums are worthless if the directors lack the desired qualifications.

What are these qualifications? First of all goodness, and by this I mean that enveloping kindness which always desires the happiness of one's fellowmen and seeks always the welfare of those under one's care, that kindness which makes one helpful to those who suffer and indulgent towards those who succumb to temptation, but repent—in short, that goodness which, diffused around, shines in the hearts of others and inspires sympathy and confidence.

For the maimed soldiers, who have suffered greatly and have sacrificed for their country their most precious possession—their young lives—whose bodies have suffered from wounds, and their souls from mental anguish and anxiety and sometimes the terror of death close at

hand—for these men a great deal of tenderness is necessary. They call for it as the parched earth calls for rain, or the fevered lips for a refreshing drink. And as mothers keep for their sickly children their warmest caresses, we must lavish all the treasures of kindness on our cripples, as a small compensation for their physical losses.

Therefore the cripples, although they are still under military discipline, cannot be treated just like able-bodied soldiers. The main object of military discipline is to make obedience to the commander a fixed habit, to substitute reflex action for voluntary movements, so that on the field of battle the man will blindly obey the orders of his chief and execute them as though pushed on by an irresistible force.

But our cripples are done with war; they will never again be soldiers. Therefore it is useless to put pressure on a man's will, so as to teach him blind obedience to a command. Discipline may be reduced to what I shall call "civilian discipline," that is, obedience to a rule which is dictated by the common interest, so that order may reign, for without order life in a community would be impossible.

For this reason I am a warm advocate of a mixture of military and civilian directors. We have tried this experiment at Port-Villez most successfully. The civilians round off the cor-

ner, and soften the military discipline without breaking it. The men confide their grievances more readily to a civilian, and he can intervene officially with the military chief to right a wrong or mitigate a trouble. This collaboration is like that of the father and mother in a large and united family. The mother invariably agrees with the decisions of the father, but by delicate intervention, earnest advice tactfully given, so that the authority of the chief shall always be maintained, she lessens the harshness of the paternal decisions, and usually makes them more acceptable.

Kindness, however, must go with devotion, which is, if I can so express myself, kindness in action.

Devotion is a very rare virtue, for it is the reverse of the egoism which is twined into the inmost fibres of human nature. There are many who do the letter of their duty strictly, but never know the spirit. Very often this is the fault of their former chiefs, who have broken the spirit of their young assistants by a disconcerting, chaffing scepticism. This is a reason, but not an excuse.

Devotion is a virtue which should abound in our institutions for the disabled. The heads of the school should watch their pupils with the greatest care to prevent their suffering from the effects of their physical inferiority. At

Port-Villez all the teachers show this devotion. Their working hours are not measured by the official time-table, but by the needs of the men; they encroach upon their leisure to increase the welfare of their pupils. Even after a hard day's work they will help with an entertainment, and on Sunday, instead of having the day free, as they do in time of peace, they give to the cripples the time which they might spend with their families. They know that their presence is appreciated by the pupils more than they can express, and that, on the other hand, their absence leaves a void which chills the hearts of all. Devotion expresses itself in a thousand different ways; improvements in the management of the school, and small attentions of all kinds; but its chief characteristic is the victory of kindness over self-interest.

A third qualification is initiative. In these war associations, which are essentially ephemeral and necessarily improvised in a large measure, initiative on the part of the directors is very valuable, provided it is used earnestly and methodically. In peace times on account of the centripetal movement which prevails in all organizations in spite of all efforts for decentralization, as a general thing one only acts by order and with the formal assent of the superior authority; action is, therefore, pottering and slow.

In time of war, when needs are pressing, one must dare to go forward. One must venture to disentangle a complication on his own responsibility and not be afraid to stretch a point if the interests of the school and the progress of the pupils are at stake.

The greatest enemy of initiative is usually the chief who is jealous of the success of his assistants. Instead of rejoicing at the victory over routine or at the good accomplished, he tries to find fault, demands why such and such a measure was taken without consulting him, or, if he finds nothing to criticize, flourishes his great argument, "Who gave you authority to do this work or introduce this reform? Next time, you must, at least, ask my advice!" There is no possible reply. The military hierarchy is a good thing, for the whole military edifice rests upon it, but some people use it to impede progress.

The chief merit of subordinates, therefore, consists in doing good in spite of an irascible superior, carrying on their work without antagonizing him, and forcing his approval by success, which justifies everything and disarms criticism.

How beautiful life would be and what useful things could be accomplished, if all one's activity could be given to constructive work. Unfortunately about eighty per cent of one's energy must be wasted in combatting harmful and

reactionary influences, and barely a fifth of our energy remains for useful work.

A fourth qualification is the spirit of "carry on" in the work. Although one should not be the slave of a preconceived plan, it is necessary always to know where one is going, and not allow oneself to be turned aside from the goal by minor considerations. This goal is the welfare of the disabled men and their economic rescue, to which everything else should be subordinated.

Finally, the last qualification, which I should have mentioned first, because it is the foundation of all the others, is efficiency. The possession of this quality is so necessary that it seems superfluous to mention it. How many undertakings go to smash, because they are run by amateurs, who have the best intentions in the world but no idea of how to manage an association!

# CHAPTER XVI

## A Delicate Point

We here touch on a delicate point. It would have been simpler to pass over it in silence, but, at the risk of hurting the feelings of some people, we shall treat of the matter—of course with discretion—because we consider it of the highest importance in the successful re-education of mutilated and disabled soldiers. The point is whether re-education depends upon medicine and surgery or upon technical training. Without a moment's hesitation we decide for the latter. When the soldiers arrive at the re-educational schools, their wounds are already healed. A great many of them are able to dispense with all special medical treatment. Their principal pre-occupation is learning a new trade, and to this end they devote all their energies and time. As for those who still need medical care, they go at specified times to the physiotherapeutic classes, the greater number having but one lesson of educative gymnastics each day. Physical re-education gradually passes into the background, as actual work replaces gymnastics. The real aim of the school is the apprenticing of men to new trades, for this apprenticeship gives

them back their economic independence and restores them to their place in society. Are re-education schools organized primarily for physical or for professional training?

Medicine intervenes to assist the vocational training; it facilitates, but does not originate this training. It is at the service of technical teaching, as it is of the army, but it would never occur to anyone to make a doctor the commanding officer of a battalion, under the pretext that his mission is to watch over the health of the men.

We understand that the doctors, who work so devotedly for the wounded men, surrounding them with the tenderest and most skillful care from the moment they enter the operating room until they leave the convalescent wards, should be inclined to concern themselves about their patients after they leave the hospital. But we permit ourselves to suggest to them that they are going too far afield if they aspire to direct the vocational re-education of the disabled. If they intervene as advisers, everyone will listen to them with respect as long as they remain in their own field, but let them leave to the specialists in technical instruction, or in their absence, to the assistant professors of education the furnishing of the apprentice workshop, the buying of machinery and tools, the working out of the curriculum, and the solving

of the questions of method. Let them be deaf to the prompting of vanity and have an ear only for the needs of their pupils, namely a good technical instruction which will facilitate a speedy graduation from the school of apprenticeship.

I am persuaded that if many of the schools for the disabled seem to have little success, it is due to lack of competent direction. The students feel they are being supervised by a lot of amateurs, who experiment, do and undo, and run the shops in haphazard method. Nothing is so discouraging as instability, the lack of a definite aim. The men are not deceived for any length of time, and in countries where re-education is not compulsory they will quickly lose respect for their teachers.

As in all things one must not lay down too rigid or absolute rules. Some exceptions invariably arise. Men like Dr. Bourillon, who have consecrated their lives to the re-education of cripples, have become through that very devotion specialists in technical instruction. There are some medical directors who have taken care to obtain expert collaborators, technicians and teachers, to whom they give a free hand. A physician who is broad and open-minded on subjects which are not related to his profession often makes an excellent director of a school, provided he is surrounded by com-

petent assistants and gives them entire liberty in their own field of action.

But we dread those martinets who wish to rule and command everyone, who think themselves the fount of all knowledge and devote themselves to pretentious and unproductive laboratory work—too often to the detriment of the students who only serve to experiment on; while they hand over the technical teaching to tutors picked up at random and too often, alas, mere theorists. Under such a régime the students lose all the benefits of methodical teaching, for method conserves time and reduces the period of apprenticeship, while rendering it of more value because it has a better foundation.

During a recent visit at a school of re-education my conversation with the physician-director was interrupted by a foreman who came to ask for authority to spend twenty dollars for wood and who insisted on the necessity of certain machinery for the students. With due dignity the worthy doctor discussed the advantage of ordering the wood and promised to go to X—— the next day to buy the machinery at a bargain.

"Let us not force our talent, for we should do nothing well."

## CHAPTER XVII

### The Placing and Protection of Disabled Soldiers During and After the War.

I have reached the end of my work. But before quitting the reader, I wish to add a few words on the placing and protection of maimed and crippled soldiers. At present a disabled soldier, more or less re-educated, can easily get a position. Labor is scarce and the public still gushes over the victims of the war. Everyone exalts the courage of the heroes, is thrilled by their medals, and touched by their crippled condition. People vie with each other to serve these heroes.

Friendly Aid societies through their directors pass very generous resolutions about these invalided soldiers. They will reserve the best places for them, treat them with consideration, and pay them good wages.

These resolutions are very laudable and I am sure that the people who make them are acting in good faith and really mean to keep their promises.

But we must not forget that we are living in an epoch of great excitement and patriotic fervor, that we are delighted but awestruck

witnesses of bold deeds which make us shiver, and of examples of devotion and self-sacrifice which are as fine as the noblest deeds of ancient heroes. The smell of powder and the noise of the guns intoxicate the combatants; but the war literature, which also smells of powder and through which the civilians in the rear perceive the din of battle, excites the heart and brain, and makes them incline to noble and generous actions.

When these heroic times have passed and the thunder of the cannon has rolled away and we return to what I would like to call normal life, but which will be, at least at first, bristling with economic, social, and political difficulties, a great many resolutions made in the exaltation of the movement will melt like snow in spring-time.

Even a very good and generous employer, if he is in financial difficulties and must reduce expenses, or dismiss some of his employees, will certainly dismiss first the crippled soldiers, to whom he is paying wages out of all proportion to the work they do.

No doubt he would deeply regret the painful necessity of this step, but the result would be the same for the victims, for a good deed is worth more than the most altruistic sentiments.

This consideration should stimulate the disabled soldiers to depend chiefly upon them-

selves, and practice the old proverb, "The Lord helps those who help themselves." They should profit by their stay in the vocational schools to learn a remunerative trade; they should push as far as possible the physical re-education of their stiffened or crippled limbs, and acquire a thorough general and technical education, so that they may approximate, as nearly as possible, the output of the normal laborer. This last consideration makes us retain our pupils until we have made competent workmen out of them. We do not always succeed, for some of them are too seriously wounded and have too little ability, but it is the goal towards which we strive and which we often attain.

A Parisian lady, who is really well-informed about re-education and agrees with most of our ideas, recently asked me if it was to our own interest to keep our pupils such a long time. Obviously, if we only considered the financial side of the question, we should place our pupils as soon as possible with any employer who would take them off our hands and pay them a living wage. But we think this would be a bad calculation; it is infinitely preferable to train skilled workmen for our national labor supply, men who know their trade and can support themselves by it, and in the last analysis the Belgian State will save, and more than save, later, in its budget for charities, the sums it is now spending on these men.

At Port-Villez the men live in a family atmosphere which most of them regret to leave. Some of them could leave the school as soon as they finish their apprenticeship, but they prefer to remain with their comrades, who recall to them their families and their distant country, and several of those who have tried an independent life elsewhere have returned to us, because they were homesick for the school.

However there comes a time when the old pupils must make place for the new comers. Then the graduates are examined by a committee of the three heads of departments; very often they have already received an offer of a job from some employer. The committee looks into each case, decides whether the apprenticeship is completed, whether the promised wages will be enough, and whether the employer who offers the position has good business standing. An invalided officer takes charge of the correspondence with the French administration, getting information about the employers, and obtaining the numerous documents which a change of residence requires.

When the committee is quite satisfied, it authorizes the men to leave the school. These formalities are prescribed in the interest of the cripples, and are put through without heckling the men; on the contrary, the greatest kindness is always shown.

The school gives each graduate a civilian's suit, and a wicker valise containing a shirt and two pair of socks, a workman's blouse, and a pair of sabots.

The men who are placed in this fashion keep in touch with the school, for they are not discharged from the army, they are simply on leave without pay and can be recalled for any misbehavior. Each month they send their address to the officer in charge of those on leave, and he sends them the little paper we publish at the school, the *Port-Villez,* which like *La Libre Belgique* is irregularly regular.

In accordance with the views of M. Justin Godert we try, if possible, to make artisans of the men, for the artisan enjoys greater independence and can often practice his trade at home, which is a great advantage for these crippled men whose physical condition may require care at any moment. The crippled man working at home does not have the fatiguing trip daily between his house and place of work; the amount of his wages is not disputed by the healthy workers, and some of his family can help him with his work.

But the installation of an artisan presupposes tools and an expenditure of money which the disabled soldier usually cannot manage. At Port-Villez every pupil makes himself a set of tools under the direction of the techni-

cal instructor. As for the capital necessary to start, there is every reason to believe that societies will be founded which will either give the money outright to a deserving man, or lend it to him without interest, and on slow and gradual repayment. I would prefer the second plan, for I do not approve of charity for the men, as it spoils them and does not encourage them to work for themselves. In fact we might fear that some beneficiaries of these easily acquired gifts might proceed to simply waste the money. I hope that the Fund for Cripples, of which I have already spoken, will be able to take charge of setting up some of the re-educated soldiers.

A Belgian committee has been formed in London to raise funds to build houses for the cripples. In the beginning, I believe, the plan was to build an entire village for them. I had an opportunity to tell these gentlemen that, in my opinion, they are on the wrong track and that it would be a more practical use of the money collected to devote it to setting up some artisans, small farmers, or poultry-breeders. Indeed, if they carried out their first plan it would be difficult to determine which men should be the "elect ones," for as the Bible says, "Many are called, but few are chosen." Moreover it would not be desirable to segregate a large number of cripples in one village, as after

a short time they would make life unbearable for each other; there would be mutual complaints, the whole nation would be charged with ingratitude, and the smallest germs of discontent sown in such a place would blossom in mutual recriminations. Two unfortunate men, obliged to live together, far from consoling each other, feel doubly unhappy, for each reacts on the other. Port-Villez, where more than 1400 disabled soldiers live together in peace and relative happiness, cannot be cited as an example; our pupils' happiness is due to the fact that they are sheltered and their immediate needs supplied, while their morale is systematically sustained. A French lady, owner of a large business, has made an experiment which seems conclusive in this matter. She took 400 crippled soldiers into her factory, but, on account of the difficulties which her protégés made her, she was obliged to discharge half of them and has since gotten rid of most of the rest.

Far from concentrating the cripples in any special locality they should be scattered as widely as possible all over the country.

A plan which seems quite feasible to me is the creation of coöperative communities, where, with only a very few exceptions, only re-educated men, all practicing the same trade, would be allowed to enter. One of their present monitors, a capable and energetic man, could be-

come their director. The members would be paid according to their output, and at the end of the fiscal year the net profits would be divided equally among all the members of the community. However, it would be dangerous to embark on such an enterprise without certainty of success, for failure would be doubly disastrous, falling upon poor people who have already had more than their share of misfortune.

For our crippled carpenters and cabinet-makers I dream of founding a coöperative shop, which would specialize in the making of school furniture, office furniture, gymnastic apparatus, class-room equipment, etc. I am considering this specialty particularly because such a shop would find without difficulty a large number of permanent customers in the administrative departments of the State, provinces, or communes, the school boards, and big business firms, all of whom, if the prices were the same, would give preference to the victims of the war. And then in my position as Inspector-General of the primary schools of Belgium, I would be their great protector, would guide and advise them, and help them always to make first class articles.

Blind soldiers might be grouped, under similar conditions, to make brushes, or even articles in leather or wood, for I have seen the blind

soldiers in Italy easily learning to make a number of different articles, which did not require a perfect finish. The Commissariat of the army, and the railroad, postal and telegraph administrations, would be their natural customers. Co-operative communities would also relieve the government of having to herd these poor men in hospitals, which, in spite of everything that can be done, have a vague suggestion of prisons.

There could even be coöperative stores for market gardeners, horticulturists, and poultry breeders, who might have a selling agency in the nearest town, and we would try to secure regular customers for them among the large dealers in Brussels and Antwerp.

However these organizations would still leave us a large number of men whose productive capacity has been considerably reduced and who must be placed in workshops. The question of wages to be given these men and the division of their work in the shops should be studied carefully. Some people think that these matters should at once be regulated by law. I do not agree with them. Let us wait until normal conditions are re-established and see what the régime of liberty will do.

Factory owners will want to choose work for the disabled men which they can do without abnormal fatigue and do almost as rapidly as

the robust workmen, for the interests of the factory and of the workers are the same in this matter.

Everything indicates that employers' associations will agree to admit into their factories, on the same basis, all the maimed and crippled workmen available, so that not even one re-educated soldier who is capable of working will be left to beg on the street.

The labor unions have proudly proclaimed that they will take their crippled comrades under their special protection, that the members of the unions will assist the cripples in the workshops to the extent of their ability give them good advice, and always show them the respect which their glorious wounds demand.

The State and the great public corporations will also take into their service a group of disabled soldiers. In some countries a law has already been passed giving preference to the employment of crippled soldiers in certain specified occupations. Such a measure seems to me unwise, for all the wounded are not equally worthy of the solicitude of the authorities.

As in everything there are degrees in the seriousness of the wounds, and it would be quite unjust to put in the same class a man with a bullet through his leg, or a shell-splinter in his hip, and a man who has lost an eye, or is quite blind, or a man who has lost an arm or a leg.

Leaving the blind out of the question, it seems to us that the man whose arm is amputated at the shoulder is the most handicapped for work, because the absence of even a stump to which a special apparatus for work could be attached obviously puts him in an inferior position. Therefore it seems logical that the public authorities should give these men such positions as door-keepers, museum attendants, etc. It might be interesting to establish a scale of injuries, and a corresponding scale of public employment for these men.

In countries where there is no compulsory re-education there seems to me a dangerous possibility that all the wounded will expect to obtain some little "official" position. If that does not always induce laziness, at least it does not encourage them to re-educate themselves. And the public authorities should notify all the disabled soldiers, even those having the greatest claim to a position, that they must receive instruction during the present period of inaction and that the best educated will be placed first.

This question of more or less serious wounds leads me to speak of pensions for the disabled soldiers. For real invalids the pension should be enough to permit them to live decently with their families, or if they are too helpless, they should be cared for in an institution. As for

the sums to be given to the others, I will say that our law of May 25, 1912, should be thoroughly revised, for its scale of military pensions mentions only "amputation of a limb," as if the amputation of an arm or of a leg was of the same importance, which we dispute. From an aesthetic point of view, it may be worse to lose a leg, but from the point of view of work, to lose an arm is much worse.

In order to be as just as possible the injuries should be listed according to the greater or less hindrance which they cause the man in his work, and the scale of pensions should be adjusted on this basis.

I have no illusions about the difficulties of this adjustment, for the typical disabled soldier does not exist. There are many different kinds of disability, as we have said before. Therefore it is indispensable to make the list elastic, and to fix a maximum and a minimum pension for each injury. The ministers in making out these lists should consult not only surgeons but also teachers in the technical schools, sociologists, and all those who are defending the interests of the disabled soldiers.

I hope that the commissions, which will be charged later with the task of fixing the scale of pensions, will be composed not only of army surgeons and high functionaries but will include the different sorts of people that I have

spoken of as suitable for a commission to revise the scale of our pension law. And above all let us have competent ministers to supervise the commissions, and to secure harmony and justice in their various rulings.

While writing these lines, an article of M. Maurice Barrès, in the *Echo de Paris* of November 20, 1916, is at hand, and I cannot resist quoting the postscript, which expresses the same hope that I have just elaborated.

"P.S.—The Department of State Manufactures admitted as an 'infirmity which would not prevent the employment of the man in question the loss of a foot, or leg' (even a hand, I believe). But here is a commission, composed of doctors, who know nothing about the requirements, the methods or nature of the work in the department of tobacco, which has taken upon itself to offer its opinion. And in its report in the *Journal Officiel* on July 18 last, it excludes men who have lost an arm or leg from these positions which were waiting for them. Still worse; this commission is dismissing such men from the positions they are already holding. This is too bad! Knowing that a regulation was being prepared in favor of the victims of the war, certain State factories—I will mention the tobacco works at Reuilly—had already employed men with a hand or leg amputated. They were satisfied

with the work of these men; but the doctors' report pays no attention to this fact or to the desires of the Tobacco Administration. And the day that the new nominations, which conform to the letter of this rule, are published, the works at Reuilly will have to discharge these crippled men whose work is entirely satisfactory.

"Can this be borne? Shall I not be heard? Shall I have protested in vain? I reserve the right to insist and enlarge upon my complaint."

It is to be supposed that the State will not only pension the crippled soldiers but will also give them protection. In France, the National Office for the Crippled and Invalid Soldiers has been created. This office places disabled soldiers.

This example will, no doubt, be followed more or less closely by Belgium. As we shall have fewer invalids than the French, such an important organization will not be necessary for us. We will content ourselves with a committee of patronage, composed of influential people who will have the leisure to occupy themselves personally with the interests of the disabled soldiers, people whose hearts are open to the misfortunes of others, and who will consent to take personally tiresome but often needful measures for the benefit of the crip-

ples with employers and public authortiies. The presence of one or two ladies on the committees would do no harm. There should be no honorary members, only active ones in every sense of the word. This commission should be invested with a certain amount of authority and should have funds at their disposal, which would allow them to give immediate help in urgent cases, or if the funds or private organizations are exhausted, to lend money without interest to cripples who desire to start in business. It would have a permanent secretary's office with a conscientious and industrious man at the head of it, a man who would be a friend of progress, not a pretentious and egotistical functionary such as I have sometimes met. Above all let us avoid making this commission stereotyped or hidebound with officialism.

As M. Maurice Barrès wrote in his article of November 20 in the *Echo de Paris,* "The State and the administrations, whose merits I recognize, do not know how to enter into true and complete relations with the individual whom they wish to assist. Private associations succeed better in this."

Therefore we expect much better results from a mutual aid society of the cripples themselves. We intend to organize one with the pupils and former pupils of Port-Villez and Mortain. We will accept as members all the war cripples

who wish to join. Of course politics will be banished from this society, for in our official capacity we cannot mix in politics. If other associations are formed later, we will be glad to coöperate with them on a definite common program.

Our association proposes to furnish medical aid and medicine to its members, for in their enfeebled physical condition it is to be feared that they will need this care. We will have a fund for men who are out of work and will ask the public authorities to contribute to this fund. But our chief object will be to give help to all our members whenever they want it. We will guard their interests, and intervene energetically when these are injured, and if our personal intervention does not produce the desired result, we shall take the case to the official patronage committee.

Our first concern will be to place the men. To succeed in this we have already ordered some preparatory work. All our present and former pupils at Port-Villez have their papers, giving their life-history: place and date of birth, former residence, details of the family, trade and wages before the war with the name and address of the employer, military position and conduct during the war, wounds, brave deeds, citations, treatment in the hospitals and operations undergone, physical con-

dition on entering the school of re-education; educational status at that time, the trade chosen, progress in general instruction and in apprenticeship, natural and acquired aptitudes, and finally the details of their plans.

For we try to go over these plans with each one of the men, and discuss their chances of success. We try to put them back, if possible, in the place where they lived before the war. We weigh all the pros and cons, discussing with them the favorable and unfavorable factors, and decide on the means of realizing their plans. Our instructors help us, filling out the papers of the pupils according to information given them by the different departments. Sometimes we have to combat firmly fixed impracticable notions in "palavers" which recall to our veterans of the Congo their interminable parleys with the natives; and sometimes we have to try to rouse indolent natures who wish, like the birds of the air, to reap where they have not sown.

Thus we prepare for the future. When the bugle has at last sounded the call for the joyful re-entry into our country, we will be ready to act efficiently for each of our men, and we will begin our campaign at once. We hope to succeed in most cases, for our plans are well laid. We know at which doors to knock, what measures to try, and how much money to spend.

So our pupils will not know idleness, or aimless loafing which would make them lose the good habits they acquired at the school of re-education.

What we are doing for our little country, the bigger nations can achieve for each of their great military zones.

Thus the disabled and crippled soldiers will not be wrecks, but respected citizens who will honorably take their place in the world born of the war. They will not have to beg, for the nation understands that it must give these men justice, not vulgar charity. Thanks to their vocational re-education, they can support themselves, for their wages, added to their pensions, will allow them to live honestly and support their families.

The work, courageously undertaken in spite of their injuries, crowns them with a new halo. They will be respected by everyone, for their glorious wounds tell every passerby that they have played a brilliant part in the great war.

In our Belgian schools, the masters will teach the children to love those who, paying with their blood and their limbs, have helped to reconquer our independence. They will be held up as examples to the young, and thus our children will become patriots, who will not have their souls mutilated by an iron collar of neutrality imposed by foreign powers, but, on the

contrary, like their fathers and older brothers in the day of danger will make a barrier of their bosoms, which will protect our dear country much better than a scrap of paper which the Bethmanns and their masters can tear up without shame.

*Sainte-Adresse, December 1, 1916, St. Eloi's day, the workman's holiday.*

# APPENDIX

*Card to be presented by each man at his appearance before the Vocation Guidance Committee.*

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BELGIAN NATIONAL SCHOOL FOR DISABLED SOLDIERS.

PORT-VILLEZ AT VERNON (EURE).

Number .....
Nature of Wound .....
General Teaching:
Flemish Class .....
French Class .....
Vocational Teaching .....
Special precautions necessary during apprenticeship.....

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Port-Villez, ..... 191
The Pedagogical Director.

Witness—
The Doctor—
The Head of Workshops—

Signature of Instructors.

Signature of Head of Workshops or of Professor.

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This card must be brought to the Pedagogical Instructor.

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*Card placed at each workbench.*

Name of apprentice .....

Former trade .....

Date of arrival in shop .....

HOURS OF THE COURSE

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## ATTENDANCE CARD.

Shop..... Number.....

Name in full .....

### ATTENDANCE.

From..... To.....

| Hours | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 to 8½ | | | | | | | | |
| 9 to 10 | | | | | | | | |
| 10 to 11 | | | | | | | | |
| 11 to 12 | | | | | | | | |
| 13 to 14½ | | | | | | | | |
| 14½ to 16 | | | | | | | | |
| 16½ to 18 | | | | | | | | |
| Mechanical and physio therapy | | | | | | | | |
| Total of hours | | | | | | | | |

Number..... Total number of hours.....

From..... To.....

*Daily Treatment by Physiotherapy Card.*

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BELGIAN NATIONAL SCHOOL FOR DISABLED SOLDIERS.

PORT-VILLEZ AT VERNON.

PHYSIOTHERAPY.

Name ..... Room..... Diagnosis.....

| Month | Mecano therapy | Gym. pedagog. | Gymn. medical | ? | Electric treatment | Hot air baths | Massage | Sun baths |
|---|---|---|---|---|---|---|---|---|
| 1. 9, 17, 25 | | | | | | | | |
| 2. 10, 18, 26 | | | | | | | | |
| 3. 11, 19, 27 | | | | | | | | |
| 4. 12, 20, 28, | | | | | | | | |
| 5. 13, 21, 29 | | | | | | | | |
| 6. 14, 22, 30 | | | | | | | | |
| 7. 15, 23, 31 | | | | | | | | |
| 8. 16, 24, | | | | | | | | |

{ Seal of School. }

# BELGIAN NATIONAL SCHOOL FOR DISABLED SOLDIERS AT PORT-VILLEZ.

Picture.

Name in full .....

Former Profession .....

| Shop | Hospital | Date | | Mode of departure | Scholastic section | | Remarks |
|---|---|---|---|---|---|---|---|
| | | Entry | Departure | | French | Flemish | Progress realized |
| | | | | | | | |

Card for Classification by workshops.

*Aptitude Card.*

## BELGIAN NATIONAL SCHOOL FOR DISABLED SOLDIERS.

Name in full .....Matriculation number.....Date of entry.....

| Social Status | Physical aptitude | Teaching | Departure |
|---|---|---|---|
| Born at..... the..... | Examination of wound..... | I. General | Date ..... |
| Married ..... | ..... | Language ..... | Manner ..... |
| Single ..... | ..... | (French or Flemish) | ..... |
| standing ..... | ..... | ..... | ..... |
| Heighth sitting..... | ..... | ..... | ..... |
| Chest measurement..... | ..... | Efficiency ..... | Address ..... |
| Profession and former sal- | ..... | ..... | ..... |
| ary ..... | ..... | Special precautions. | Degree of apprenticeship... |
| ..... | ..... | II. Professional. | ..... |
| Diagnosis ..... | ..... | Efficiency ..... | Salary ..... |
| ..... | ..... | ..... | ..... |
| Nature of wound..... | ..... | Branch ..... | ..... |
| ..... | Treatment ..... | ..... | Result of treatment ..... |
| Date ..... | ..... | ..... | ..... |
| Cause ..... | ..... | Special precautions ..... | ..... |
| Complications ..... | ..... | ..... | ..... |
| ..... | Orthopedic or prosthetic ap- | ..... | ..... |
| ..... | paratus ..... | ..... | General remarks ..... |
| Operations ..... | ..... | ..... | ..... |
| ..... | Physiological status of pa- | ..... | ..... |
| ..... | tient ..... | ..... | ..... |
| Results ..... | ..... | ..... | ..... |